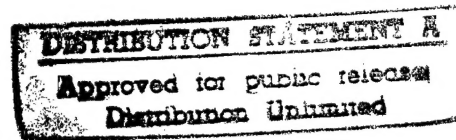


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# USSR Report

AGRICULTURE

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4 September 1984

## USSR REPORT

### AGRICULTURE

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### ACCELERATED HARVEST IN ROSTOV OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 10 Jul 84 p 1

[Article by SEL'SKAYA ZHIZN' correspondent Yu. Maksimenko: "After the Combine--the Plane Tiller," Rostov Oblast]

[Excerpts] The farmers of Rostov Oblast are stepping up the pace of crop harvesting, striving to avoid losses. At the same time the soil at the enterprises is prepared for winter crops, and post-harvest crops are sown. The motto of the harvesters: "Harvest the grain in the shortest time, with high quality!"

A mass harvest is under way in the Don region grain fields. The hard work of harvest has come at the same time this year in the south, in the Sal'sk steppes, in the Azov region, and in the northern Don area. Reports are coming in that grain crops were harvested rapidly at the Pamyat' Kirova Kolkhoz and the Kolkhoz imeni Vil'yamsa in Kagal'nitskiy Rayon. In the Azov region the harvesting and transport brigades are working on a tight schedule in the fields of the imeni 22d Party Congress and Zavety Il'yicha Kolkhozes. In Neklinovski Rayon the harvest is under way at the imeni Lenin, Rossiya and Zarechnyy Kolkhozes... Grain from the new harvest is filling the elevators.

A distinctive feature of high agricultural level enterprises is the integration of work. Cultivating machines follow the combines. The post-harvest crops are being sown, the soil is prepared for winter crops. We walk together with V. Rekus, chairman of the Kagal'nitskiy Rayon Pamyat' Kirova Kolkhoz through a freshly harvested wheat field. Rolling the resilient stalks between his palms, he says:

"Vigorous grain... The rains passed us by, but the grain still remained standing. The yield was up to 40 quintals. The kolkhoz will fulfill the plan for grain sales to the state. Our wheat turned out good in vigor too, we have delivered hundreds of tons of grain with a high gluten content already..."

Integration, time, quality... When these are in tight cohesion in the field, the cause benefits. I have followed the performance of

the farmers of Neklinovskiy Rayon for a long time. The soil here is not as rich as, let us say, in Zernogradskiy or Tselinskiy Rayons, but the grain harvests today are more uniform than in previous years--from 25 to 30 quintals per hectare.

Critically evaluating the results attained by agricultural enterprises, the Neklinovskiy party raykom drew the attention of managers and specialists to the introduction of the zonal farming system and to soil conservation technology. Much of value was adopted from the experience of farmers in the Kuban' region, Stavropol and the southern areas of the Ukraine, which are adjacent to Neklinovskiy Rayon. Fallow land practices and intensive varieties were introduced, more manure and mineral fertilizers were applied.

"Yes, with our steep slopes and a constant shortage of moisture in the soil," relates Zavety Lenina Kolkhoz chairman P. Kozlenko, "without reliable soil moisture conservation technology, it would be impossible. We cultivate the soil with plane tillers, use only stubble field seed drills in sowing winter crops. Such a moisture-conserving technology helps us to attain simultaneous germination of winter crops, protect them from droughts..."

In the integrated harvesting brigades on the fields of the Zavety Lenina, imeni Lenina and Zarechnyy Kolkhozes which we had visited, plane tillers follow the combines which work in conjunction with straw shredders. The soil is well cultivated and retains residual moisture, which was not achieved with plow tilling. In these kolkhozes using the plane tiller profile, winter wheat and spring barley remain well preserved and provide a good harvest. In fields cultivated with plane tillers sufficient moisture is retained by the time of autumn sowing to place seeds uniformly into the moist soil layer by using stubble field seed drills and obtain simultaneous germination.

And it is the same at all enterprises where winter crops were sowed with stubble field seed drills using the plane tiller profile. This is why the grain sowing area in Neklinovskiy Rayon needed minimal rehabilitation. Considerably more winter crops are harvested here these years than in the adjacent Matveyevo-Kurgan-skiy, Kuybyshevskiy, Rodionovo-Nesvetayskiy and Azovskiy Rayons, and at the same time the soil is prepared for future harvest more rapidly.

We talk with agronomists, brigade leaders and farmers. They are unanimous in the opinion that plow-less soil cultivation guarantees the harvest, and the plane tiller belongs in the harvesting and transport complex. What, then, holds things back? Important technological elements of the harvesting and transport complex--removal of post-harvest remnants and soil preparation were unfortunately formed in last order this year too. Hence the long gap

between the threshing, straw collection and soil preparation. This was not avoided this year in many enterprises of such rayons as Peschanokopskiy and Rodionovo-Nesvetayskiy.

There is also still a shortage of soil conservation equipment, and what is available is often used inefficiently. It also cannot be considered normal that orders by enterprises for BIG-3 harrows, KPSH-9 and KPSH-5 cultivator plane tillers, KPG-150, KPG-250 and KPG-2.2 deep subsoil plane tillers, stubble field seed drills and even light weeding harrows are consistently not filled. Minsel'khosmash enterprises are extremely slow in organizing the production of combined soil cultivation machines and plane tiller equipment. The All-Russian Scientific Research Institute of Mechanization and Electrification of Agriculture in Zernograd developed a system of combined soil conservation equipment, but Minsel'khosmash has delayed placing it in production.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### HARVEST PROCEEDS IN KUBAN REGION

Moscow TRUD in Russian 11 Jul 84 p 1

[Article by TRUD correspondent A. Isayev: "First Leaders of the Harvest," Krasnodar, Rostov on the Don]

[Excerpts] There is not a cloud in the July sky. The heat is intense. But such weather now only makes the grain growers glad: the hard work of harvest has begun. Along the Rostov--Krasnodar route, no matter where you look, grain combines advance in ranks, five-six machines per group. Arriving at the edge of the field, they stop, and are immediately approached by trucks to load grain.

This year the grain growers of the Kuban are committed to sell the state 4,315,000 tons of grain. For this reason all efforts now are aimed at bringing in the harvest without losses. The rayon agronomic-industrial associations [RAPO] are working with this thought in mind. At the Pavlovsk RAPO, for example, they took the trouble of making sure that the grain elevator and balanced feed plant are ready in advance to receive grain. Reports were presented at meetings on a full supply of motor vehicles to the farms for transporting grain from the fields to the threshing floor, and from the threshing to the elevators, and on road conditions. After all, poor roads inevitably lead to losses.

In accordance with a RAPO decision, the inter-kolkhoz balanced feed plant, the rayon Sel'khoztekhnika association and other enterprises assigned transport vehicles for the harvest. Truck bed sides were raised, body cracks were filled, and each truck was equipped with top covers. In a word, everything was done to exclude losses of grain. As they said in the old times, save every stalk you try--there'll be bread and pie...

The farms of Dinskiy Rayon took up an accelerated work tempo from the first days of the harvest.

The grain was reaped and sent to the dump in a short time, and the machine operators of Slavyanskiy, Abinskiy, Severskiy and other rayons of Krasnodarsk Kray are now engaged in threshing operations. This is the guarantee of a good harvest and of meeting the



commitments made. But instances of grain losses, of waste are encountered. For example, unharvested strips remain on the barley field in the first brigade of Kolkhoz imeni Chapayev in Koshekh-abl'skiy Rayon. Hoping for good, standing grain, some machinery operators failed to equip the reapers with stalk lifters. And the day before the harvest, it rained, and the wind flattened the grain in places...

A somewhat different picture was in adjacent Rostov Oblast, where some areas suffered from drought. And now dryness prevails here. For example, not a drop of rain has fallen onto the fields of the Put' Lenina Kolkhoz in Kagal'nitskiy Rayon since the first days of May. But still the winter wheat yield is up to 40 quintals per hectare. An average of 47 quintals of winter barley was gathered in the second section. This was to a considerable degree facilitated by new agricultural practices--tilling without soil turnover, which is being introduced in accordance with a RAPO recommendation, just as at other agricultural enterprises. True, not all machinery operators have adopted it yet. But current weather conditions have shown the advantages of turnover-less tilling: it helped to retain moisture in the fields.

The Kagal'nitsk RAPO is an advocate of all that is new and progressive; following its recommendations the farms are introducing the most productive varieties, many of which were developed at the oblast selection center in Zernograd. Such as the wheat varieties "Donskaya Bezostaya," "Urozhaynaya" and "Tarasovskaya-29" for example. The industrial technology of growing hybrid corn, the collective contract--all these are the concern of RAPO specialists. The rayon has already delivered 5,000 tons of hardy wheat.

In order to make grain transportation more successful, special route maps were compiled for the drivers and road signs were put in place indicating "To the threshing floor," "To the elevator" throughout the rayon, and in the oblast as well. After all, many outside workers, unfamiliar with local places, were brought in to transport grain. The RAPO prepared the maps, and the road builders put up distance markers. This also made work much easier for the specialists of the centralized transport administration which was set up at the Kagal'nitsk elevator for the duration of the harvest. Incidentally, the work efficiency is also evident in the fact that no truck lines are accumulating and the unloading proceeds quickly at this elevator as well as at another, the Kirov elevator.

Many specialists of the local Sel'khoztekhnika association are working these days in the grain fields of Kagal'nitskiy Rayon. According to a decision of the RAPO council, a special detachment was organized to which nine combines were assigned. It is sent to those kolkhozes and sovkhoses where a special need exists at a

given time. These "Cornfields" and "Stalks" are assigned to the central Sel'khoztekhnika farm. The detachment has six motor vehicles of its own. A total of 28 people work in it, and its composition remains almost unchanged. The detachment is headed by Senior guarantee engineer I. Repkin.

Kagal'nitskiy Rayon is now the leader in the competition for the harvest in Rostov Oblast. Here too one can feel the high level of agricultural cultivation, the RAPO organizational work, and the concern of party and trade union organizations and managers for socialist competition, and for the life of those who labor on the harvest. The farmers strive to harvest and preserve the entire crops grown.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### PREPARATION OF EQUIPMENT FOR HARVESTING DELAYED

Moscow SEL'SKAYA ZHIZN' in Russian 20 Jun 84 p 1

[Article by S. Luzgan (Ukrainian SSR): "The Harvest Will Not Wait"]

[Text] If one takes an interest in the "secrets" of the high and stable yields which are gathered by farmers of the leading kolkhozes and sovkhoses under any weather conditions, one is inevitably convinced that they assign a special place to prompt and high-quality preparation of machines and effective utilization of technical equipment.

Minutes are golden when the crops are being harvested. If you lose an hour you cannot make up for it in a year -- that is what the machine operators are told before the harvest by Hero of Socialist Labor Lyubov' Andreyevna Lyubchenko, the chairman of the Bol'shevik Kolkhoz in Zhitomir Oblast.

Such sayings have become traditional on many farms where they prepare promptly and efficiently for the harvest, where they greet the harvesting of grain crops, as they say, fully armed.

Almost a month ago the farms of Cherkassy Oblast placed 96 percent of the grain combines and 94 percent of the reapers on the ready line. And the initiators of the oblast competition for exemplary preparation of technical equipment -- the workers of Gorodishchenskiy Rayon -- had repaired all of the harvesting equipment by the beginning of June. These days in the oblast they are checking for the completeness of harvest-transport complexes and detachments.

Practically all of the arsenal of technical equipment has been made ready for harvesting grain crops on the majority of farms in Crimea, Zaporozhye, Donetsk, Voroshilovgrad and Chernovitsy oblasts. One can find examples of prompt and careful preparation of the machinery for harvest work in almost every rayon.

But in the republic as a whole the situation is not so gratifying. There is still a lot of unrepaired technical equipment on the farms of Chernigov, Zhitomir, Kiev and Khmel'nitskiy oblasts.



"Because of the tardy preparation of the machinery last year," says V. Bityk, a combine operator from the Kommunar Kolkhoz in Pereyaslav-Khmelnytskyi Rayon in Kiev Oblast, "during the harvest the equipment stood idle for an average of more than 2 hours a day. The season assignment was fulfilled by only six of the 15 crews. The harvest was prolonged, which led to losses of the crop. This year the combines are somewhat better prepared for their work. But we are bothered by the fact that there are eight trucks which have not been repaired yet."

The republic has created a powerful specialized repair base. Many of the kolkhozes and sovkhoses have their own shops. But the whole problem is that the base is not being utilized to its full capacity. Take, for example, Kirov Oblast, which is one of the first to enter the harvest. By the beginning of June there were 700 combines and more than 600 reapers that had not been prepared here. This was at a time when the repair shops of the oblast Sel'khoztekhnika had been operating at only half strength during the winter period. Many farms do not promptly take advantage of the forces of their partners in the RAPO.

The tendency to put off until later the repair of harvesting equipment, unfortunately, has not been properly condemned in other oblasts of the republic. This is not the first year that in the Ukraine 20 percent of the grain harvesting combines are going into the harvest in May and June. Even this year the kolkhozes and sovkhoses have not yet refurbished more than 5,000 combines. To these one must add about 2,000 machines which are in repair shops of the Goskomsel'khoztekhnika, where they were not delivered until May of this year instead of October or November of last year. The same situation has arisen with the reapers.

"At our bases," says the deputy chairman of the UkrSSR Goskomsel'khoztekhnika, I. V. Rudenko, "we have accumulated hundreds of millions of rubles' worth of unsold technical equipment. Hundreds of trucks, 2,500 tractors, 4,000 tractor trailers, more than 4,000 grain combines and more than 1,000 sugar beet combines are sitting there doing nothing. The farmers need all of this technical equipment. But because of the inefficiency of agricultural agencies it is not being used."

In the republic Ministry of Agriculture I asked why the new technical equipment is standing around at the bases.

"You see," answers the deputy minister, N. M. Kozyrev, "some farms do not purchase the new equipment because they do not need it, and those that need it do not purchase it because they do not have free money in their accounts. This problem is being resolved by the republic council of ministers ..."

The grain harvest will begin in a couple of days in the Ukraine. But about 10,000 combines, and many reapers, trucks and other equipment cannot start working on the farms of the republic yet (some have not been repaired and others have not yet been purchased). Urgent measures are necessary to make sure that all of the technical equipment goes out onto the fields. For the harvest will not wait.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### FINAL PREPARATIONS FOR HARVEST WORK UNDERWAY

Kiev PRAVDA UKRAINY in Russian 5 Jun 84 p 3

[Article by A. Stepanov: "The Harvest Is Not Far Off"]

[Text] The grain fields are rapidly gathering strength, and the harvest is not far off. Success in conducting it will depend largely on how promptly and well the harvesting equipment is prepared. The combines, reapers and other necessary machinery which are available in the republic make it possible to mow and thresh the grain in shorter periods of time and without losses. The load per one reaper is 97 hectares, and the load per grain harvesting combine is 118 hectares. One can give many examples in which combine and reaper operators have harvested the crops from areas of these sizes in 60-70 hours.

High productivity is achieved, as a rule, on those farms which prepare ahead of time for the harvest. Delay in getting started and idle time during the process lead to the same consequences -- losses of grain. On the kolkhozes imeni Zhdanov in Roshchanskiy Rayon in Rovno Oblast, imeni Kalinin in Berdyanskiy Rayon in Zaporozhye Oblast, imeni Kirov in Belozerskiy Rayon in Kherson Oblast and many others such things do not happen. Here the repair of the grain harvesting equipment is completed even before the beginning of the new year, and it is completely ready for operation when it is put away for winter storage.

Unfortunately, this is not the case everywhere. In Nikolayev Oblast, for example, last year 130 combines were unable to go out onto the grain fields on time, and in the Crimea -- 67. And strange as it may seem, certain managers have tried to explain such things by saying that the harvest came earlier than usual.

This year the rates of preparation of harvesting equipment in a number of places leaves something to be desired. The farms of Kirovograd Oblast are among the first in the republic to begin harvesting. But there, as in past years, they have again prolonged the preparation of grain harvesting machines: the kolkhozes and sovkhoses have not yet repaired 700 combines and more than 600 reapers. And yet the repair shops of Sel'khoztekhnika worked at half force all winter. And even now many farms are not hurrying to take advantage of the services of their partners, saying that they will do the work themselves. It is a farm matter, as they say. But this requires that they

have their own fairly good repair base and permanent teams of workers, which do not exist on the majority of kolkhozes and sovkhozes.

There is no doubt that nobody knows better than the machine operators the weak places in their equipment, but they are simply not able to correct them themselves, the more so since beginning in spring until well into autumn each of them has plenty of work to do in the fields. Moreover, repairing technical equipment is not their business. The agro-industrial complex has an immense repair service for this, and it should be primarily responsible both for the time periods for the preparation of the machinery and for its quality. It is the business of the machine operators to plow, plant and gather the harvest.

Many farms apparently do not understand this or do not want to understand this in Poltava, Odessa, Lvov, Volyn, Chernigov and a number of other oblasts where at the present in time tractor brigades 550-900 combines are standing around waiting for assistance from their "masters." The spare parts needed for replacement on many of them were allocated 2-3 months ago, but the machine operators will not take it upon themselves to deliver them to the machines. Moreover, there are quite a few combines that do not have masters at all yet. For example, in Novogorodkovskiy Rayon in Kirovograd Oblast, they still do not know who will be operating 18 of the combines in the fields.

On the whole, the farms of the republic have not yet placed 10,000 combines on the line of readiness. Moreover, 2,000 of these machines are undergoing capital repair in the shops of Sel'khoztekhnika. They were not delivered here until May instead of October or November of last year. In other words, 15 out of every 100 combines are not yet ready for the harvest. This amounts to a total of 12,000 machines. And this is equal to the entire fleets of such oblasts as Vinnitsa, Dnepropetrovsk and Donetsk taken together. And not everything is well with the reapers either: every one of 9,500 reapers is either missing some kind of "small part" or needs technical servicing -- to be raised up and adjusted. Incidentally, absolutely new reapers and combines require the same kind of care. If one were to make a comparison, the level of readiness of combines is 5 percent lower, and reapers -- 3 percent lower than for this same time last year. Each percentage point means 1,000 machines.

The reduction of the rates of repair work is the result of a swing of the pendulum brought about by the tolerant attitude on the part of individual councils of rayon and oblast agro-industrial associations and agricultural ministries and departments. For each rayon and oblast has created a staff for preparing technical equipment. The schedules have been established by orders. Meetings and selection conferences are held regularly. Frequently when such measures are being conducted one hears assurances and promises, but the schedule for repair work is not met. This is not the first year when 20 percent of the grain harvesting combines in the republic are being prepared for harvesting in May and June. Is it not time to change this practice? The stability of the grain crops depends on this to a considerable degree

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### QUICK CHANGES MADE IN CRIMEAN HARVEST TACTICS

Moscow SEL'SKAYA ZHIZN' in Russian 1 Jul 84 p 1

[Article by A. Soldatskiy (Crimea Oblast): "Maneuvering on the Crimean Fields"]

[Excerpts] If one were to draw a picture of the fields of the Crimea and note on it the winter barley crops which the farms are harvesting today, the picture would turn out fairly spotty. For instance, on the Severnyy Sovkhoz, where there were less than 100 millimeters of precipitation during the season, they are threshing 8.5 quintals of grain per hectare. On the Voinskiy and 50 let Oktyabrya sovkhoses in this same Krasnoperekopskiy Rayon they are receiving 30-33 quintals per hectare, and on the Kolkhoz imeni Kalinin in Pervomayskiy Rayon -- 53 quintals per hectare.

Such are the fluctuations! On the average the crops are not bad. In this connection one should note that the Crimean farmers have successfully "violated" tradition and sharply increased the area planted in winter barley. While previously 30,000-40,000 hectares were allotted to it, last year they planted it on 194,000 hectares. They planted the barley late, when the light rains had passed. But this produced vigorous shoots. The mild winter protected the plants.

The existence of a large area planted in winter barley changed the harvest tactics as well. While previously the winter barley harvest was only a warmup for the big harvest, now it is necessary to conduct it on a large area from the very beginning.

A typical feature of this year's harvest is the comprehensiveness of the work. Having concentrated the harvesting equipment in large detachments, the farm has enough days left after threshing to clear the fields of afterharvest residuals and prepare it for another planting. On the kolkhozes imeni Kalinin in Pervomayskiy Rayon, imeni XXI s'yezd KPSS, Rossiya and Druzhba narodov in Krasnogvardeyskiy Rayon one can see a combine, a plow and a seeder on the same area. The repeat plantings will cover a total area of about 80,000 hectares in the oblast. Experience shows that the summer plantings in the Crimea produce full-value grain by autumn, especially of soy beans and millet.

It is not easy for the Crimean farmers to fight against the caprices of the weather. So this year's harvests are the more valuable. Many farms of Simferopol'skiy, Krasnogvardeyskiy, Pervomayskiy, Nizhnegorskiy and other rayons will harvest 35-40 quintals per hectare of winter barley.

A tradition has long existed in Crimea Oblast: the neighbor's field is not an alien field. So now the neighbors are helping one another in the harvest. The Kolkhoz imeni Kalinin in Pervomayskiy Rayon has included all 11 combines in the work. The machine operators harvested the grain and delivered it to the threshing floors in 8 days. But even though the kolkhoz had not completed its own work, it sent five combines to the Sovkhoz imeni I Maya. Barley is planted on 818 hectares there. In order not to allow losses, they have resolved to harvest the grain together in shorter periods of time.

Maneuvering technical equipment is an important reserve for accelerating the rates of the harvest. There are more than 2,000 reapers and 4,500 combines working on the fields of the oblast today. The load of early grain crops per one combine is 122 hectares. This will make it possible to harvest the spike crops in 10 working days. But not all the grain is ripening at the same time. This is why it was decided that they rayon agro-industrial associations would carefully check on the condition of the planted areas, and it places where the grain had ripened they would use the combines not just from one farm, but also from the neighboring farms as much as possible.

When harvesting winter barley in the Crimea they do not forget that in the near future they will have to reap the main food crop -- winter wheat. But between the threshing of barley and the harvesting of winter wheat there is a time interval of 8-12 days. It has been decided to use this time period for cultivating the fields: to plow the area that has been cleared and to store up the seed supply.

Work on the Crimean fields proceeds in a unified flow. From the first day of threshing, grain from the new harvest began arriving at the grain receiving points. The farmers have committed themselves to send no less than 836,000 tons of it to the grain bins of the homeland. This is more than the plan calls for. In the future lie the harvesting of winter wheat, corn and rice. Complete harvesting of the crop will enable us to repay some of last year's debt. Such a possibility exists.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### HARVEST IN FULL SWING IN SIMFEROPOL AREA

Moscow TRUD in Russian 1 Jul 84 p 1

[Article: "The Frenetic Rhythm of the Harvest Time"]

[Text] Machine operators of the Crimea are conducting the harvest and planting simultaneously. Yesterday they completed work on half of the area intended for replanting. Each day the seeds are placed on more than 3,000 hectares. Efficient organization of the harvest with subsequent clearing of the harvested fields helps them surpass last year's rates.

The roar of machines never ceases 24 hours a day on the fields of the Kolkhoz imeni Zhdanov in Simferopol'skiy Rayon. The machine operators do not leave them even early in the morning when the dew is forming. Their labor is organized according to the watch method. During the day the mowing and threshing are done by less experienced machine operators, and in the evening and at night, when it is necessary to work in the light of the headlights, the veterans are brought in.

Grain growers have raised a rich yield. The highly productive strains of barley, Tsiklon and Mirazh, produce more than 40 quintals of grain per hectare. This is the result of skillful treatment of the fields with fertilizers.

The tempo of the harvest becomes busier each day. Certain kolkhozes and sovkhozes have already completed the threshing of the barley. The equipment that is freed is sent to the neighboring farms which need help. And soon the combines will go out onto the wheat fields. All of the spike crops, which occupy an area of 35,000 hectares, in the rayon are to be harvested in 2 weeks.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CRIMEAN PARTY AKTIV DISCUSSES AGRICULTURAL TASKS

Moscow PRAVDA UKRAINY in Russian 5 Jun 84 p 2

[Article by A. Sivachenko (Simferopol): "The Key Task for Farmers"]

[Text] Farmers of the Crimea are persistently working on carrying out the assignments of the five-year plan. Plans of the first 3 years for the sale to the state of animal husbandry products, fruits and berries, grapes, oil-bearing crops and soy beans have been fulfilled. The majority of enterprises that are included in the agro-industrial complex have coped successfully with the assignments of the 3 years in terms of production volumes and increased labor productivity. Processing enterprises have sold almost 67 million rubles' worth of products in excess of the plan.

The farms' economic indicators are also coming up. Last year the level of profitability on the kolkhozes was 33.1 percent, and on the sovkhozes -- 27.8 percent. On an average for the year the farms of the oblast received 20.5 percent more profit than they did under the 10th Five-Year Plan.

These facts were presented at a meeting of the oblast party and economic aktiv which was held last Saturday. Its participants discussed the tasks of party, soviet and management agencies of Crimea for further increasing the production of grain and other agricultural products and carrying out the recommendations of the all-union economic conference and meeting of the party and economic aktiv on problems of the agroindustrial complex.

"Since the May (1982) Plenum of the CPSU Central Committee which adopted the Food Program," said the speaker, the first secretary of the party obkom, V. S. Makarenko, "a good deal has been done on the kolkhozes and sovkhozes to strengthen the material and technical base and to improve organization of labor and management of production. Party, soviet and management agencies have begun to utilize more efficiently the potential that has been created in rural areas, which has provided for steady progress of agriculture.

Speaking of the immediate tasks which must be completed in the time that remains in the five-year plan, participants in the meeting concentrated their attention on increasing grain production. This is a basic problem for agriculture. How are Crimean farmers handling it? One must say that during past years there has been considerable advancement of the art of managing the



branch. Under the 10th Five-Year Plan they applied 7.1 tons of organic fertilizers per hectare of plowed land, and now they apply 10.2 tons. In 1980 there were 55,000 hectares of clean fallow in the oblast, and now there are 81,000.

The kolkhozes and sovkhoses have taken the correct direction toward increasing the areas planted in winter barley. More than 197,000 hectares are being allotted to it this year. During the 3 years of the five-year plan its productivity has been 4.1 quintals higher than that of winter wheat.

The experience of the Kolkhoz imeni Krupskaya and the Kolkhoz imeni Voykov in Nizhnegorskiy Rayon, the Druzhba narodov and Rossiya kolkhozes in Krasnogvardeyskiy Rayon and the Pyatiozernyy Sovkhoz in Krasnoperekopskiy Rayon shows that in places where farming is conducted creatively and technological discipline is strictly observed they receive 40-50-quintal yields of grain.

A. V. Solov'yevskiy, the chairman of the rayispolkom, said in his speech that the grain growers of Dzhankoyskiy Rayon had fulfilled the three-year plan for the sale of grain by 102.2 percent. The party gorkom and the RAPO council have set for the farms the task of annually selling no less than 100,000 tons of high-quality grain under any weather conditions.

But on the whole the level of development of grain farming in the oblast still does not correspond to the tasks set at the all-union conference and the meeting of the republic party and economic aktiv. During the 3 years of the five-year plan the gross grain yields in the republic have decreased by 46,000 tons as compared to the 10th Five-Year Plan. A good deal of grain was not turned over to the state by Razdolnenskiy, Chernomorskiy, Leninskiy, Pervomayskiy and Sakskiy rayons. Last year one-third of the farms harvested 15-20 quintals of grain per hectare, and 29 kolkhozes and sovkhoses harvested less than 15 quintals.

The reason lies in the fact that many farms are slow in assimilating the scientifically substantiated system of farming. The agronomy services of the oblast and rayon agricultural agencies and the kolkhozes and sovkhoses have still not restructured their work in keeping with the new requirements. In a number of rayons the level of assimilation of crop rotations is fairly low. In this connection, serious criticism was aimed at the oblast agricultural administration, the rayon agro-industrial associations, and specialists of the branch of the Ukrzemproyekt Institute.

Crimea Oblast is a large supplier of strong and valuable wheats. The average annual procurements of them under this five-year plan have reached 123,000 tons. At the same time the managers and specialists of many kolkhozes and sovkhoses which are located in the zone where commercial grain is produced, relying on natural factors, do not work very hard to obtain stable yields of high-quality grain.

Workers of the agro-industrial association of Simferopol'skiy Rayon have come out with a good initiative. They have made a commitment this year to sell the state 74 percent of the planned procurement volumes of strong and valuable



wheats. How the workers are carrying out this task was discussed at the meeting by the first secretary of the party raykom, I. S. Tarasyuk.

One must take an economical attitude toward the land. Work directed toward increasing its fertility and utilizing it effectively should be not episodic, but systematic in nature. It was emphasized at the meeting that herein lies one of the main conditions for steadily increasing the production of grain and other farm products.

Its participants analyzed in detail the shortcomings in the development of irrigation farming. For there are 325,300 hectares in the oblast that are irrigated, or 18.5 percent of all the agricultural land. Last year every irrigated hectare produced 930 rubles' worth of products and the funds invested in the construction of the North Crimean canal have already been recouped. Now the farmers of the oblast are regularly achieving the planned productivity on irrigated land, including from grain crops. Last year 56 out of the 110 farms reached it.

Important issues in the development of other branches of agriculture were raised in the speeches of the chairman of the Kolkhoz imeni Krupskaya in Nizhnegorskiy Rayon, V. I. Cherfas; the chairman of the RAPO council of Razdolnenskiy Rayon, A. I. Sushko; the general director of the Elita NPO, N. P. Demchenko; the secretary of the party bureau of the Novaya zhizn' Kolkhoz in Sovetskiy Rayon, I. S. Murashov, and others.

The meeting's resolution earmarked measures for successful implementation of the decisions of the 26th Party Congress, subsequent plenums of the CPSU Central Committee and the country's Food Program.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CRIMEAN HARVEST PREPARATION WORK INSPECTED

Moscow PRAVDA UKRAINY in Russian 15 Jun 84 p 2

[Article: "On the Threshold of a Major Examination"]

[Excerpts] Farmers of the Crimea have done a great deal to make sure that the grain fields bestow a generous harvest on us. The main task now is to harvest it without losses. It is intended to receive an average of 27.6 quintals of grain from each of more than 500,000 hectares. There are 445 harvest-transport detachments going out into the fields. They have at their disposal 4,200 combines, more than 2,000 reapers, 6,200 trailers and 6,000 trucks.

Crimeans began to worry about the harvest as early as October of last year, after the oblast seminar which was held on the Kolkhoz imeni Krupskaya in Nizhnegorskiy Rayon. At that time the farmers of this area came out with an initiative: to prepare the technical equipment for the harvest ahead of schedule and well. Crimean farmers have done a good deal since that time. The oblast staff has begun to hold meetings right on the farms each month and keep the course of the repair work constantly under their supervision. Responsible workers from agricultural agencies have been assigned to each farm.

During the autumn and winter period about 2,000 tractor drivers and 1,000 truck drivers were trained. More than 10,000 machine operators have increased their skills locally. The watch method will be applied extensively, and keeping accounts with the drivers with the help of coupons will relieve combine operators of the need to waste valuable minutes filling out papers. On a number of farms the straw will be gathered by homemade multiton straw rakes, which will release a large detachment of machine operators and a good deal of technical equipment.

Machine operators of the Kolkhoz imeni Kalinin in Belogorskiy Rayon have quite different concerns. As early as December of last year they sent 21 batteries to the rayon center. Within 20 days the rayon Sel'khoztekhnika was to have determined the degree of suitability of the batteries, fill out a document or a claim check, and submit an order for the performed work. This was not done there, and on the kolkhoz they forgot about their batteries. They did not

remember them until May. As a result, at the fault of the rayon Sel'khoztekhnika and because of the inefficiency of the kolkhoz engineering service, on the eve of the harvest the machine operators received only 5 repaired batteries and 16 that were unsuitable.

Preparations for the grain harvest, hay mowing and procurement of early silage were unsatisfactory on the Kolkhoz imeni Chapayev and the Kolkhoz imeni Lenin in Bakhchisarayskiy Rayon. Every year the Primorskaya poultry farm in Leninskiy Rayon is late in repairing its machinery. And even now some of the combines are not ready to go out into the fields.

The repair of the combines was completed late on the Druzhba Kolkhoz in Nizhnegorskiy Rayon. By the end of May on the threshing floor of this farm they still had not begun to prepare grain cleaning equipment. The ZSM-10, ZAR-5 and ZAV-40 sets of equipment were broken down and they had not been touched since last year.

Workers of Sakskiy Rayon are fully ready to greet the harvest. On the state poultry breeding farm imeni Frunze and the Druzhba and Saki sovkhozes all of the technical equipment has been adjusted, and the roads, sidings and loading areas are in good condition. Truck drivers and combine operators, tractor drivers and threshing floor workers have all taken training.

But on the territory of the Sovetskaya Ukraina Kolkhoz the roads are broken up in places, and even now, first in one place and then in another, bunches of green silage are growing in the potholes. These are places where grain has been lost enroute in past years. This is something for workers of the rayon DRSU to think about. There are many potholes and ruts along the road to the grain threshing floor of the Yubileynyy poultry sovkhoz. And the condition of the threshing floor area cannot be called satisfactory. The head of the grain threshing floor, Ye. I. Botova, correctly thinks that they are not yet ready to receive grain. Unfortunately, this concern is not enough for the farm managers.

The harvest is already on the threshold. On the whole farmers of the Crimea have prepared better than in previous years for the battle for grain. The task now is to overcome individual omissions, to start the harvest in an organized way, and to gather the grain in short periods of time and without losses.

The inspection brigade: G. Krivolapov, inspector of the oblast people's control committee; A. Tsemko, division chief of the oblast administration of the state automobile inspection of the internal affairs administration of the oblispolkom, major in the police; N. Kolotiy, deputy chief of the oblast agricultural administration; I. Kirsanov, chairman of the Dzhankoy city people's control committee; A. Vashchenko, combine operator of the Rossiya Kolkhoz in Dzhankoyskiy Rayon; and Yu. Yenov, correspondent of PRAVDA UKRAINY.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### WEATHER CHANGES SURPRISE FARMERS

Kiev PRAVDA UKRAINY in Russian 16 May 84 p 1

[Article: "Caring for the Planted Areas"]

[Text] This spring is showing the farmer one unexpected event after another. The sharp alternations between heat and cold, the strong winds that dry out the land, the unusually high temperatures during the last days of April and the beginning of May -- all this demanded from the grain growers special mastery, composure, organization and labor tempering.

During these fast-moving days losing even a couple of hours can result in a significant underharvesting of the crop. This is why it is necessary in the most decisive way to put a stop to the slightest manifestations of disorganization and laxity.

Many farms of the republic are conducting the spring planting in a friendly and organized way, in spite of the increased volume of field work. Along with measures intended for increasing the fertility of the soil and a large amount of work for introducing order and bringing scientifically substantiated crop rotations in line with soil and climate peculiarities, this will provide a fairly good reserve. But all that has been done should be regarded only as the first stage in the struggle for a high final result.

Speaking at an all-union economics conference on problems of the agro-industrial complex, General Secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, Comrade K. U. Chernenko said: "Today we are faced with a task -- reaching higher goals in the production of grain and industrial crops and providing the people with food products, and above all meat, milk, fruits and vegetables." Rural party organizations of the republic should also organize their work in light of these instructions. And it should be arranged in such a way as to reach the minds and hearts of the people, to notice and in all ways support those who are in the lead, and to severely call to account those who are negligent and slipshod.

The major concern in rural areas now is for prompt and high-quality care for the planted areas. Our main efforts here should be directed toward maximum retention of moisture in the soil. And to do this we must utilize with

greater return the entire arsenal of means that are at the disposal of the modern farmer -- combining of operations, soil packing and the application of herbicides.

Primary attention should be devoted to winter wheat, our main grain. We are speaking not only of increasing the production of grain, but also of improving its quality. Recently in a number of oblasts, particularly Kherson, Zaporozhye, Dnepropetrovsk, Donetsk and Kirovograd they have been paying less attention to this problem, as a result of which they have not been fulfilling the plans for gross yields and sales of strong and valuable strains of wheat.

Their production requires special technology, and one of the mandatory elements of it is top dressing of the planted areas with carbamide. It is very important not to lose time this year, and to perform this work on schedule and with high quality.

To provide for constant supervision of this processes is the direct responsibility of party organizations, and primarily in those oblasts where there have been arrears in the production of strong and valuable wheats. We are speaking, of course, about sending directives down to the lower levels -- on what date and on what field to begin the top dressing. It is important to ensure the proper attitude in the people and to arm them with an understanding of the importance and necessity of the work they are performing.

Great hopes are being placed in corn -- a reliable source of augmenting the grain forage balance. Following the initiative of the Dnepropetrovsk farmers, who have resolved to obtain a million tons of grain from this crop this year, workers of other oblasts have also adopted increased commitments. In this area all possible support and encouragement should be given to the efforts of party organizations in Odessa and Kirovograd oblasts, who have lead the battle of the grain growers of obtaining 1 million and 900,000 tons of corn grain, respectively. Under the direct leadership of oblast party committees here they have essentially developed and are already implementing comprehensive programs which are directed toward ensuring the planned yields.

Corn growers of these oblasts have conducted the planting at the best time periods and with high quality, and now they are preparing to care for the planted areas. They have been convinced from practice that industrial technology by no means precludes interrow cultivation. Therefore they prepared the necessary set of implements ahead of time. It is important that the same goal of obtaining the largest possible yields be adopted by all of the detachments, teams, farms, rayons and oblasts.

This pertains not only to corn, but also to other crops. Our republic, for example, has the largest area planted in sugar beets in the country. They were planted at good times this year, and industrial technology is being applied on considerable areas. The majority of the farms have begun to care for the planted areas. In places where they have prepared promptly for this things are going smoothly. In Baltskiy Rayon in Odessa Oblast, 5,500 of the 7,000 hectares planted in sugar beets are being cultivated by detachments and teams that have been changed over to the collective contract. The majority of the plantations are planted at once for the final density of the plants. And

in places where the plants are too dense, they thin the rows. This work is well organized on the Avangard, imeni Lenin and Pravda kolkhozes. Other farms of the rayon are also keeping up with them.

And here is an announcement from the Poltava farmers. The oblast party organization now regards the mobilization of people to care for the sugar beet plantations as its primary task. The efforts of literally everyone have been directed toward carrying it out -- from the first secretary of the obkom party committee to the party group organizers of the tractor brigades and mechanized detachments. Of course the machine operators constitute the main shock force here. But the concerns of the sugar beet growers are not being sidestepped by the outside supporters either -- the collectives of industrial enterprises, organizations and institutions, housewives and pensioners.

A large and especially responsible role is being played these days by farm managers and specialists, and especially agronomists. It is their immediate duty to make sure that when forming the density of the sugar beets, the number of plants on the plantations is 25-30 percent greater than the previously accepted norms. It is also necessary to organize a decisive battle against pests and diseases of the plants and weeds. The latter is especially important because of the shortage of productive moisture in the soil in a number of oblasts.

The spring fields are a test for everyone -- the machine operators, the farm specialists and the RAPO councils. The new management agencies in rural areas, the farmers' partners in the agro-industrial complex, must proceed in their activity primarily from a knowledge of how to increase the return from each hectare of land. And this can be achieved only with a skillful combination of forces, with a thoughtful, creative approach to the problems which are raised by life.

The farmers have many concerns now: and each of them must be dealt with well, carefully and conscientiously -- for on this depends the fate of the harvest, and, consequently, also the rates of implementation of the Food Program.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### BRIEFS

MACHINE OPERATORS' RUSH--Odessa--Long-awaited rains poured over the fields of the oblast at the beginning of June. The row crops began to grow rapidly and the spikes of grain are beginning to fill out. But the weeds have also begun to develop. This is why sets of cultivating equipment have gone to work everywhere. On the kolkhozes Put' k kommunizmu, imeni Suvorov and others in Nikolayevskiy Rayon the machine operators are completing the second interrow loosening of the sugar beets. Fertilizers are being applied to the soil at the same time. The tractor drivers I. Velikiy, A. Matyushchenko and I. Kolomiychuk from the Pamyat' Il'icha Kolkhoz are fulfilling the norm by 150-170 percent for the loosening of sunflowers. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Jun 84 p 1] 11772

NO EMPTY RUNS--Donetsk--Automotive transportation workers of Donetsk Oblast have received their orders for shipping grain from the new crop. Here they have completed the formation of 80 cost accounting [khozraschet] brigades with the piece-rate-plus-bonus system of payment for labor. More than 2,000 trucks are concentrated in them, and more than half of them are in truck trains. Along with the trip tickets the drivers received schedules for movement over the grain routes. The routes were developed with the help of a computer in the information computer center of the oblast cargo automotive transportation administration. As a result, the drivers will be able to avoid empty runs and idle time, and increase labor productivity by 15-20 percent. The collectives of harvest-transport detachments of the oblast, which also include drivers from the kolkhozes and sovkhoses, have committed themselves to delivering more than 100,000 tons of grain from the fields to the elevators at the optimal time periods. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 23 Jun 84 p 1] 11772

LATE CORN HARVEST--Chernovtsy--The prolonged cold and rainy weather had a negative effect on the development of the corn on the farms of Chernovtsy Oblast. The heat-loving plants turned yellow and their growth stopped. This is why farmers throughout this oblast have decided to carry out additional top dressing of the planted areas with nitrogen fertilizers. A good example in this work is provided by the specialized detachments and teams of the Zhovten', Ukraina, Den' urozhaya and Druzhba kolkhozes, which are competing for 100 quintal yields of grain from each hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 23 Jun 84 p 2] 11772

KUBAN HARVEST BEGINS--Krasnodar--Selective harvesting of winter barley has begun in the southern agricultural regions of the Kuban. As projected in the pre-harvest plans, the reaping is proceeding by the two-stage method, and in a few places by direct combine harvesting. In considerable areas, where the rains have flattened the barley, the machine operators are using equipment with special adaptors for harvesting laid down grain. Combined harvesting and transport teams and brigades have been formed at the farms for mass harvesting. The hourly schedules for equipment use provide for double-shift operations. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 19 Jun 84 p 1] 2388

HARVEST INTENSIFIES--Krasnodar, 2 Jul--Kolkhoz and sovkhoz machine operators of the kray are engaged in mass harvesting of winter barley and peas, and are beginning to harvest the main food crop--wheat. More than 170,000 hectares of crops have already been harvested. Most shifts of the combined harvesting and transport teams and brigades are achieving highly productive use of equipment. As a rule, equipment on the fields of Kuban is operated in two shifts. The harvest crews value each hour of work in their efforts to fully bring in the harvest. [By Yu. Semenenko, SEL'SKAYA ZHIZN' correspondent] [Text] [Moscow, SEL'SKAYA ZHIZN' in Russian 3 Jul 84 p 1] 2388

HARVEST PACE ACCELERATES--Rostov-on-the-Don (TASS) 8 Jul 84--The machine operators of the Don region today began harvesting grain on their second million hectares. The agricultural workers are using advanced techniques in the difficult weather conditions of the intensely hot summer. Two-stage harvesting of barley and winter wheat is practiced at many farms to fully save the grain grown. The farmers of Azovskiy, Kagal'nitskiy, Zernogradskiy and Yegorlykskiy Rayons are also obtaining high yields of the grain crops. At most farms of the oblast, soil preparation for autumn sowing begins immediately after the grain and straw are taken in. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 Jul 84 p 1] 2388

KUBAN WHEAT HARVEST UNDERWAY--Krasnodar, 3 Jul--The main harvest time has arrived in the Kuban region. Today the machine operators of the southern and central areas began mass harvest and threshing



of wheat--the main grain crop of winter fields. More than 1.7 million hectares are planted with winter wheat in Krasnodar Kray. The first threshing yields indicate a good harvest. 1,200 combined harvesting and transport teams and brigades are harvesting wheat efficiently in Ust'-Labinskiy, Timashevskiy and Kanevskiy Rayons and in other grain-growing regions. The grain crops are harvested by the two-stage method and by direct combine harvesting in shifts throughout daylight hours as well as at night. The fields are then immediately cleared of harvest leavings and cultivated for second crop sowing and for winter crops. Agricultural specialists at the farms and the planters take special care with hardy wheat varieties. Preliminary grain yield estimates have been made for every field, and samples have been taken to determine grain yield and gluten quality. It is expected to fill the state graneries with the highest quality wheat constituting 90 percent of the total grain crop. [By TASS correspondent V. Kalishevskiy] [Text] [Moscow TRUD in Russian 4 Jul 84 p 1] 2388

**BLUE LEAF BEETLE**—In 1979-1983 mass propagation of the blue leaf beetle was observed everywhere throughout the central regions of the Ukrainian forest steppe. It was found mainly on areas planted in winter wheat, and individual specimens also on barley, rye, oats and grasses. But in 1982 there were also quite a few of them on the late plantings of barley, and also on places where it was underplanted after winter crops had died. Settling on the winter wheat at the beginning of stem extension, the beetles gnawed through the longitudinal openings in the leaves. When the infestation was strong, the blades turned yellow and died. The larvae of the leaf eater damaged the planted areas before the beginning of the stage of milky-waxy ripeness. Both the beetles and their larvae were found in high concentrations, mainly along the peripheries of the fields in a strip 12-15 meters wide. Most of the red-breasted and blue leaf beetles winter on plant residuals and sod of the field protection strips, borders of trees, roadside sections, meadows, clover fields and long fallow land. The second generation of the anaphes develops in the eggs of the beetles which have been deposited in the initial locations in August. The parasite also infects the eggs of the leaf beetles. The egg eaters spend the winter in the eggs of the pests in the pre-chrysalis stage. The quantity of them in nature depends on the number of eggs of the leaf beetles in the initial locations in the period just before autumn. Usually on quack grass in the flat areas of field protection strips for every 15-17 eggs of leaf beetles there are 3-4 eggs that are infested with anaphes. If the wild grasses are mowed at the beginning or in the middle of August, one finds up to 36-42 eggs of leaf beetles per 1 square meter on the sprouted stalks and young leaves, and 84-93 percent of these contain the parasite anaphes. [Excerpts] Moscow ZASHCHITA RASTENIY in Russian No 5, May 84 p 40] [COPYRIGHT: Izdatel'stvo "Kolos", "Zashchita rasteniy", 1984] 11772

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## LIVESTOCK FEED PROCUREMENT

### ADVANTAGES OF MIXED SILAGE FOR HOG FEED DETAILED

Moscow SVINOVDSTVO in Russian No 7, Jul 84 pp 2-3

/Article: "Mixed Silage"/

/Text/ In recent years, concentrated feed has been fed to the hogs at many kolkhozes and sovkhoses. Root crops, mixed silage and other traditional feeds have been practically eliminated from the rations. Naturally, this has led to the unjustified consumption of costly and deficit grain. And indeed full-value feed mixtures can be prepared by using succulent and coarse feeds, obviously in a mixture with concentrates. It is especially important for this to be taken into account when feeding sows and young stock.

Experience has shown that the inclusion of succulent and green feed in the rations for hogs makes it possible to expend concentrates in a more economic manner and in the process they are utilized more efficiently. For example, approximately 2,000 tons of mixed silage were procured last year at the Tikhiy Don Kolkhoz in Ostrogozhskiy Rayon in Voronezh Oblast. This enabled the farm to realize a savings in the use of concentrates of approximately 30 percent.

The use of mixed silage in hog raising not only improves the digestibility of nutrients in the animals, especially in the brood and young stock, but in addition, and this is very important, it lowers the production cost by reducing the proportion of costly concentrated feed in the rations.

For example, on the hog farm of the Rossiya Kolkhoz in Kamenskiy Rayon in Rostov Oblast, a savings of 60-70 tons of mixed feed is realized monthly simply through the use in the hog rations (and there are 4,800 head on the farm) of 40 percent succulent feed.

In Zaporozhye Oblast, the Rossiya Kolkhoz in Pologovskiy Rayon annually produces approximately 6,500 quintals of pork. For several years now, mixed silage has been procured here for the hogs. The inclusion of it in the animal rations makes it possible to reduce the consumption of concentrates. Last year, for example, a savings of 800 tons of grain was realized. At the Ukraina specialized hog raising farm in this same rayon, the use of mixed silage in the feed mixtures for the hogs made it possible to lower the production cost per quintal of weight increase in the hogs to 91 rubles.

Mixed silage is being employed successfully in the hog rations at the Znamya Ruda Kolkhoz in Pravdinskiy Rayon in Kaliningrad Oblast. Last year, this enabled them to save approximately 180 tons of concentrates.

The experience of the Rassvet Kolkhoz in Nesvezhskiy Rayon in Minsk Oblast underscores the economic effectiveness of the use of mixed silage in hog raising. The hog farm here is not very large. Approximately 4,000 quintals of weight increase are obtained annually. The farm uses mixed silage, the structure of which includes boiled potatoes (50 percent), corn cuttings with the ears (20 percent), root crops (20 percent) and flax or clover chaff (10 percent). The feeding of mixed silage to hogs makes it possible to use concentrated feed in a more efficient manner and it improves the assimilability of the feed mixtures and consequently the return realized from them. The specialists have estimated that even during an unproductive year, when the cost of the feed turns out to be higher than that planned, the production cost for a quintal increases by only 1 rubles. Many hundreds of rubles were saved by reducing the cost for 1 quintal of pork by 1 kopeck. For each quintal of mixed feed, a savings of 44 feed units was realized when use was made of mixed silage. It is not difficult to estimate the quantity of deficit and expensive grain that was saved.

In recent years, many farms have been procuring mixed silage for their hogs. A great amount of experience has already been accumulated in the procurement and use of this valuable feed.

The recipes for laying in mixed silage may vary in the different natural-climatic zones.

Taking into account the zonal peculiarities of the feed base, our scientists developed recipes for the mixed silage. The All-Union Scientific-Research Institute of Animal Husbandry for the Central Regions recommends the following mixed silage structure for hogs: 30 percent fodder potatoes, the same quantity of beets and carrots and 10 percent meal obtained from leguminous grasses.

The zonal and republic scientific-research institutes recommend other recipes for their zones. For example, the Kazakh Scientific-Research Institute of Animal Husbandry recommends the following content for mixed silage placed in storage for hogs (in percent of bulk): corn ears of waxy ripeness -- 65, beets -- 30, leguminous grass meal -- 5 or corn fodder -- 90 and grain waste products -- 10.

In Belgorod Oblast, a great amount of attention is being given to those problems concerned with strengthening the feed base for hog raising, a leading branch of the oblast's kolkhozes and sovkhozes. In accordance with a recommendation by the oblast agroindustrial association, each hog raising farm sets aside not less than 1,000 hectares for corn for grain and the remaining farms -- 150-200 hectares. A plan has been developed for the construction of storehouses for this corn. A study was undertaken of the experience of corn growers in Izyumskiy Rayon in Kharkov Oblast in the laying away of corn ears for extended storage in special trenches. This is the simplest and most economical method for storing corn.

For farms in Siberia, the scientists at SibNIPTIZh recommend the use of several recipes for mixed silage (in percent of bulk): beets with haulm or Jerusalem

artichokes -- 80, milled aftergrowth of clover or alfalfa -- 20 (the nutritional value of 1 kilogram of such mixed silage is 0.21 feed units and 15 grams of protein); beets with haulm or Jerusalem artichoke -- 45, carrots with haulm -- 10, corn ears of milky-waxy ripeness -- 35, milled aftergrowth of clover or alfalfa -- 10 (the nutritional value of 1 kilogram of mixed silage is 0.33 feed units and 15 grams of protein).

It should be borne in mind that the preparation of mixed silage involves many labor-intensive production processes. Thus the timely preparation of the required machines and mechanisms, transport equipment and containers in which the ensiled bulk is to be placed is a mandatory condition for obtaining high quality mixed silage. For the preparation of the components (delivery from the fields, cleaning and washing of root crops, milling and mixing of components, uniform filling of the sections), the farms use the following items of equipment: IKS-5 root crop mincer, an OM, KDU-2 feed grinder, RSS-6 straw and silage chopper, KTU-10 feed distributor, a system of loading and unloading conveyer lines, self-tipping 2PTS-4 wagons and others.

In recent years the farms in the Checheno-Ingush ASSR have devoted a great amount of attention to the procurement and use of mixed silage. This work is well organized at the kolkhozes imeni Lenin in Groznenskiy Rayon, Komintern in Shelkovskiy Rayon, imeni Krasnaya Armiya in Sunzhenskiy Rayon and others. The mixed silage is being procured in accordance with several recipes (in percent of bulk): corn ears of waxy ripeness -- 60, sugar beets with haulm -- 25, gourds -- 10 and leguminous grass meal -- 5 (in 1 kilogram of such mixed silage there are 0.33 feed units, 24 grams of digestible protein, 19 milligrams of carotene and 50 grams of cellulose); gourds -- 60, fodder beets -- 15, alfalfa sun-dried to 50 percent -- 20 barley dert' -- 5 (1 kilogram of such silage contains 0.25 feed units, 21 grams of digestible protein, 100 milligrams of carotene, 44 grams of cellulose); corn ears in waxy ripeness -- 50, sugar beets -- 25, alfalfa aftergrowth -- 25 (the nutritional value of such mixed silage is 0.36 feed units, 23 grams of digestible protein, 14 milligrams of carotene, 51 grams of cellulose). It bears mentioning that all of the components for these different recipes for mixed silage are grown on the farms.

A large quantity of grain is being saved at the Iskra Kolkhoz in Kuzhenerskiy Rayon in the Mary ASSR by substituting mixed silage for a portion of this deficit feed in the rations for hogs. The ratio for the feed components for young pigs is as follows: potato waste products (boiled) -- 60 percent, carrots with haulm -- 5, alfalfa aftergrowth -- 27, grass meal -- 5, fresh mountain ash -- 3 percent. The mixed silage for adult hogs includes potato waste products (boiled) -- 60 percent, carrots with haulm -- 5, alfalfa aftergrowth -- 15 and milled grain waste products (1 kilogram of such a feed mixture contains 0.28-0.3 feed units, 26-27 grams of digestible protein, 1.7-3 -- calcium, 1.5-1.7 grams of phosphorus, 15-24 milligrams of carotene and 40-42 grams of cellulose).

The farm's specialists developed the following technology for laying in mixed succulent feed. For the boiling of potato waste products at the edge of a trench, they installed two EKP-4 units. They placed prepared grain waste products, non-milled alfalfa aftergrowth and non-milled carrots with haulm over the potatoes in the trench. For enriching the silage with Vitamin B<sub>12</sub>, per

ton of ensiled bulk, they apply 1 gram of a solution of cobalt chloride and silage yeast at the rate of 0.5 liters for every 10 tons of bulk, diluted in advance in 100 liters of water. Last year, 3 tons of mixed silage were procured at this kolkhoz for each sow.

In recent years, many kolkhozes and sovkhoses in Orel Oblast have been devoting a great amount of attention to the efficient feeding of hogs. Greater quantities of succulent feed are being included in the rations and particularly mixed silage. At the sovkhoses Vyshne-Ol'shanskiy, Yarishchenskiy, Nizhne-Zhernovskiy, Studenovskiy and Demidovskiy and at the Kolkhoz imeni XXII Parts'yezda in Livenskiy Rayon, a great amount of experience has been accumulated in the procurement and use of mixed silage of high quality for feeding to hogs. Its structure includes root crops (40 percent) grain waste products (10 percent), perennial leguminous grass fodder or corn in milky-waxy ripeness (40 percent) and grass meal and grass and straw chop (10 percent).

The inclusion of mixed silage in the hog ration at the Studenovskiy Sovkhoz, for example, increased the yield of young pigs per sow and it reduced the consumption of concentrated feed by 12 percent. Roughly the same positive indicators are to be found at other farms which use mixed silage in their hog rations.

In order to obtain high quality mixed silage, a great amount of important is attached not only to the correct selection of the components but also to the technology employed for laying in and storing the products. Positive experience has been accumulated in this regard on farms in the Udmurt ASSR. The mixed silage is prepared from root crops (60-70 percent), leguminous grass fodder (20-30 percent) and grass meal and grain waste products (10 percent). The silage bulk is placed in lined trenches divided into sections by partitions. Each section can accommodate 50-70 tons and is filled over the course of 2-3 days. Once a section is filled with silage bulk, it is covered with polyethylene plastic and warmed by means of straw.

Fine experience in the procurement, storage and use of mixed silage in hog raising has been accumulated at the sovkhoses Kiyasovskiy and Yazhbakhtinskiy in Kiyasovskiy Rayon, Kigbayevskiy in Sarapul'skiy Rayon, Pychasskiy in Mozhginskiy Rayon and Novogorskiy in Grakhovskiy Rayon.

Scientific studies and many years of experience at leading farms have shown that the use of high quality mixed silage in hog rations is indeed profitable.

Unfortunately, this fact is not being taken into account in all areas and, as a result, large quantities of concentrates are still being consumed. For example, 9.5 feed units are being consumed per quintal of pork on farms in the Crimean Oblast, with the proportion of grain being 85 percent. It bears mentioning that the possibility exists of lowering the proportion of concentrated feed by substituting green and succulent feed for a portion of it. Large areas have been set aside at the kolkhozes and sovkhoses for these crops. Nevertheless, in the structure for hog rations fodder constitutes only 2.5 percent; this is approximately 90 kilograms per head. The proportion of succulent feed in the winter rations is even less. During a season, the hogs are each fed only 11 kilograms of mixed silage. True, in recent years the

oblast's farms have started to devote attention to the procurement of mixed silage. Last year, for example, 19,000 tons of such silage were procured. Its quality was low however. The mixed silage was obtained from such nutritionally low components as straw, corn stalks and the waste products of vegetable production. Very little use was made of beets, gourds, corn ears or grain waste products and carrots were lacking entirely. Certainly, the feeding of such silage to hogs will not produce the desired results.

It should be remembered that mixed silage that is prepared from nutritional components is rich feed for hogs. One ton of this concentrated succulent feed, when fed to animals, replaces 1 quintal of grain. Many kolkhozes and sovkhoses are taking this fact into account and thus are including mixed silage in their hog rations as a mandatory component. For example, let us take the Kolkhoz imeni Chernyakhovskiy in Kapsukskiy Rayon in the Lithuanian SSR. For many years now, this farm has been preparing highly nutritious mixed silage for its hogs with the following structure (in percent of bulk): potatoes -- 30-40, carrots with haulm -- 20-50, root crops -- 15-20, leguminous grass aftergrowth -- 15-30 and grass meal made from clover -- 5-15. One kilogram of such mixed silage contains 0.25 feed units, 25-30 grams of digestible protein and 30-50 milligrams of carotene. During a day's time, taking into account the pregnancy schedules, sows are fed 3-6 kilograms of the mixed silage, nursing sows -- 2-4, replacement hogs -- up to 4 and fattened animals -- up to 3 kilograms. The farm's specialists have estimated that the kolkhoz saves 500-600 kilograms of mixed feed for each ton of increase in live weight.

The period for procuring mixed silage is approaching. the leaders and specialists must thoroughly prepare all of the equipment and containers. Special attention must be given to selecting the components to be used for laying in this valuable feed, in the interest of ensuring that it is highly nutritious.

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## LIVESTOCK FEED PROCUREMENT

### PROGRESS OF HAY MOWING, GREEN FEED PROCUREMENT OPERATIONS

Moscow SEL'SKAYA ZHIZN' in Russian 15 Jul 84 p 1

/Article: "Decisive Days of the Haying Season"/

/Text/ During a recent session, the Politburo of the CPSU Central Committee tasked the appropriate ministries and departments of the agroindustrial complex, and the party, soviet and economic organs with increasing organizational work and achieving considerable improvements in the feed procurement rates and in raising the quality of the feed. It is difficult to exaggerate the importance of this decision. Nature leaves only a brief amount of time in which to lay away the required quantities of high quality haylage and hay and to carry out the planned volumes of work associated with the artificial dessication of green feed.

This fact is well understood by the agricultural workers. The mowing of grasses is being carried out at high rates on many farms in Lithuania, Moldavia and Tajikistan. From 6 to 10 quintals of feed units per standard head of cattle have already been laid away in the leading rayons in Kaliningrad, Moscow, Minsk, Rovno, Chirkent and a number of other oblasts. The hay procurement rates are higher than those for last year in Azerbaijan and Armenia and for haylage -- in Georgia.

At the same time, considerably less coarse and succulent feed was procured in a number of oblasts in the Russian Federation, the Ukraine, Kirghizia and Kazakhstan than was the case by this same time last year. In Uzbekistan, the Altay Kray and in Novgorod, Sverdlov and Orenburg oblasts, the grasses still have not been cut down on one half of the areas. The leaders and specialists at many kolkhozes, sovkhoses and agroindustrial associations and the workers attached to the party and economic organs are tolerating serious shortcomings in the organization of labor for feed procurement purposes and they are displaying only weak concern for creating the conditions required for highly productive work by both the personnel and equipment. Very effective measures must be undertaken such that a turning point will be reached in the near future, with increases taking place in the grass mowing rates, the stacking and baling of hay and the laying in of haylage.

The experience of leading workers suggests methods for carrying out this task. Considering the complicated meteorological situation of this current year, this includes first of all flexible maneuvering when selecting the feed procurement

technology, depending upon the prevailing weather conditions and the highly efficient utilization of equipment. The Osnezhnitskiy Kolkhoz in Brest Oblast has shown the type of results that can ensue from this. Here the workers succeeded in obtaining their first cutting of sown grasses in less than 10 days. And the Chaykovskiy Sovkhoz in the Udmurt ASSR required only 4 days in order to fulfill its plan for accumulating hay. The experience of these farms is being disseminated extensively throughout the republics. Unfortunately, there are also examples of another type. The machine operators and farmers at the Kerchomskiy, Kortkerosskiy and Prigorodnyy sovkhozes have proven, on the basis of work performed by them, that it is possible to lay in good hay even during unstable weather provided it is stacked on platforms and frame rakes made out of poles. And although the materials for these simple arrangements are readily available in the rich forests of the Komi Autonomous Republic, nevertheless this useful method is by no means being employed on an extensive scale.

It is well known that success has been achieved in raising the feed procurement rates in those areas where the equipment has been concentrated at large feed production subunits. For it was precisely the efficient maneuvering of logistical resources and the shock work performed by inter-farm detachments, including Sel'khoztekhnika detachments, that made it possible for many oblasts in Belorussia to harvest their grasses rapidly and to place them in storage in a reliable manner. This method is being employed extensively in Gorkiy Oblast. In Aktyubinsk Oblast the mechanized detachments have been equipped with wide-cut harvesters and this has had an immediate and positive effect on the haying rates. However, the highly productive utilization of feed harvesting machines has not been achieved in all areas, nor are the units receiving exemplary technical servicing. In a number of areas, the repair work is being carried out on a tardy basis. In a number of rayons in Perm Oblast, only one half of the dryers were in operation during the first 10-day period in July. On some farms in the Chuvash ASSR, one fifth of the rakes and one fourth of silage harvesting combines had still not been prepared for operations by the beginning of July. Extreme measures must be undertaken if the feed production brigades, detachments and teams are to become a truly shock force for the procurement of forage.

The residents of cities and villages are providing the agricultural workers with a great amount of assistance in carrying out the feed procurement work. Their work was organized in a skilful manner in Ulyanovsk Oblast: they were provided with the necessary implements, they learned the leading work methods, concern was displayed for their daily routine and a competition was launched on an extensive scale. The patrons procured large quantities of high quality feed out on the meadows in Amur Oblast. And yet in Kurgan Oblast the city-dwellers have laid away less than one tenth of the amount of hay and haylage called for. In Lipetsk Oblast, poor control was organized over the fulfillment of tasks and also over accounting for the work of the patrons. The workers at enterprises in Ivanovo, Kineshma and Shuya are furnishing only weak assistance for their agricultural comrades in Ivanovo Oblast. Order must be restored in this work. Concern for feed constitutes at the same time concern for the development of animal husbandry.

High farm productivity can be achieved on the basis of feed that is of full value and rich in nutrients. This fact is well understood by workers in villages in the North Osetian ASSR, where four fifths of the haylage laid away



and in some rayons one hundred percent of this feed is classified as being of 1st or 2d grade quality. Preparations were made in advance for analyzing the various types of feed in Vologda Oblast, the personnel received training in the rapid-analysis methods and the farms were issued calorimetric scales, laboratory dishware, other items of required equipment and ehcmical reagents. Concern was also displayed in Omsk Oblast for checking upon the quality of the forage. At the same time, the leaders and specialists of farms and agroindustrial associations in a number of areas are devoting very little attention to the quality of the feed or to ensuring its proper preservation.

The procurement of grass feed has entered the decisive phase. The most important task of the oblast and rayon councils of agroindustrial associations -- is that of achieving active participation in the feed procurement work of all enterprises and organizations providing services for agriculture, kolkhozes and sovkhoses and coordinating their activities in an efficient manner.

The Politburo of the CPSU Central Committee has emphasized the fact that it is necessary to organize the work in a manner such that each animal husbandry farm is unconditionally supplied with an adequate quantity of coarse and succulent feed. All available forces and resources must be mobilized in the interest of carrying out this most important task.

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## LIVESTOCK FEED PROCUREMENT

### FEED CROP OVERVIEW STRESSES TECHNOLOGY

Moscow SEL'SKAYA ZHIZN' in Russian 29 Jun 84 p 1

[Article by A. Ol'yashev, chief of the Main Administration of Feeds, Meadows and Pastures of the USSR Ministry of Agriculture, and M. Smurygin, director of the All-Union Scientific Research Institute of Feeds imeni V. R. Vil'yams, corresponding member of VASKhNIL: "If You Mow On Time -- You Receive More"]

[Text] The Urenskiy Sovkhoz in Ulyanov Oblast last year procured almost twice as much feed as it needs each year. But the milk yield of the cows during the stabling period which just ended even decreased. One of the reasons was the poor quality of the feeds.

This is not the only example. In Chelyabinsk Oblast, for example, they overfulfilled the plans for procurements of hay, and haylage, and silage, but the productivity of the dairy herd was nothing to brag about. Many farms allow large losses of nutritive substances when preparing and storing forage. It has been calculated that they annually exceed 30 percent of the harvest of feed crops that has been raised. According to data of the All-Union Scientific Research Institute of Feeds, most of the nutritive substances -- almost half -- are lost because of failure to observe the deadlines for harvesting, and up to 20 percent -- because of violations of technology.

Nutritional, high-quality feeds are needed for highly productive animal husbandry. They are more economical. Thus it takes 30-35 percent less first-class forage than third-class to obtain a ton of meat and milk. According to the data of scientists, when feeding alfalfa hay at will from the early and late harvests with a digestibility of 67.3 and 54.5 percent, the cows ate 14.6 and 11.3 kilograms of feed a day, respectively.

The same thing can be observed when feeding with silage. With a ration of silage of the first class with a supplement of three kilograms of concentrated feeds the cows produce 15-16 kilograms of milk, and with silage of the third class they produce 8-10 kilograms. It has been proved that when cattle are fed bulky feeds which contain no less than 0.85 feed units per kilogram of dry substance, the expenditure of concentrated feeds decreases as compared to feeds with a nutrition content of 0.6-0.7 feed units.

The farms prepare their main quantities of hay, haylage, grass meal and, in a number of cases, also silage from perennial planted grasses and natural hay fields. The main thing on which the quality of these feeds depends are the time periods for harvesting the grasses. It is best to mow grasses during the phase of stem extension and the beginning of heading, and pulse crops -- during the budding phase. In terms of the nutritive value of the dry substance, young grasses are as good as concentrated feeds, and in terms of digestible protein content, they considerably surpass grain from grass forage crops. Prompt harvesting of perennial grasses makes it possible to fully provide the livestock with vegetable protein. The advantage of prompt mowing of perennial grasses consists in that it is possible to obtain one or two additional full-value crops during the growing period everywhere. And the increased nutritive value of the feeds produces an addition of 20-25 percent of the feed units from each hectare, and an addition of 50 percent of the protein and more. Taking this into account, the first mowing is being conducted at rapid rates in Krasnodar Kray, the Karelian ASSR and Leningrad, Bryansk, Moscow, Tula, Belgorod, Volgograd, Saratov, Rostov and Orenburg oblasts. Half of the planned quantity of hay has been stored up on the farms of Lithuania, where they have already completed the first mowing on all of the areas, and more than one-third of the planned quantity of hay has been gathered in the Ukraine.

But in spite of the obvious superiority of multiple mowings of perennial grasses, in many places they are still very late in harvesting them. They have practically not begun haying in the Komi autonomous republic. Mowing grasses for hay and haylage is getting underway slowly in Kalinin, Kostroma, Kirov, Perm, Kurgan and Sverdlovsk oblasts and the Bashkir ASSR. On many farms most of the perennial grasses are mowed during blossoming and even when they are bearing fruit, as a result of which they receive a good deal of substandard hay.

Drying hay is not the most economical way of preparing grass feeds for future use. Even with prompt and strict observance of the rules of haying, 7-12 percent of the energy and 15-20 percent of the protein are lost. The slightest violations of technology increase these losses to 30-35 percent and more. The main reasons for the losses are late mowing times, remaining too long in the gang mows and swathes, and shedding of leaves and flower clusters while raking and transporting the overdry mass. Here the first to be lost are the most valuable, easily accessible nutritive substances -- soluble fractions of protein, sugar, carotene and so forth. And this inevitably leads to reduced digestibility of the feeds, reduced productivity of the animals and higher production costs of the products.

Losses of nutritive substances can be reduced if grasses which are dry cured to a moisture content of 35-45 percent are finished up with active ventilation or chemical preservation. There is such a reliable technology for preparing high-quality feeds from young grasses as storing up haylage. All operations here are fully mechanized, using highly productive machines. Losses of nutritive substances in good haylage do not exceed 5 percent, and a kilogram of dry substance contains up to 0.85-0.94 feed units. Lithuanian farms, which have already fulfilled the plan for its procurements, value this form of feed. Storehouses are being filled with haylage more rapidly than last year on the

farms of Moldavia and Azerbaijan. Unfortunately, in a number of places they are paying less attention to storing up this feed. Thus in Ivanovo, Voronezh and Penza oblasts last year the plan for storing up haylage was fulfilled by less than one-third. This year this feed is being stored up slowly in Tambov and Ulyanov oblasts.

The most widespread violation of technology when preparing haylage is storing mass that has not been dry cured. Frequently the grass is mowed and immediately placed in the trenches. In practice they prepare silage and take credit for haylage. This is the only way to explain the fact that the kolkhozes and sovkhoses of Ural'skiy and Zapadno-Sibirskiy rayons of the RSFSR prepared "haylage" with an average moisture content of 66 percent and a nutrition value of 0.22-0.23 feed units per kilogram.

Each day grass mowing is gathering speed. But a number of farms are repeating the mistakes of past years. Thus on the III Internatsional Sovkhoz in Kashkadarya Oblast the mowed alfalfa lay in the gang mows for more than 4 days. The grass became too dry and the leaves and clusters of flowers shed. On the Kashkadar'ya Kolkhoz they are "haying" alfalfa without any real cure drying. The same thing happened on the Kolkhoz imeni S. Ayni in Samarkand Oblast.

The kolkhozes, sovkhoses and agricultural agencies are currently implementing a complex of measures approved by the CPSU Central Committee which are directed toward increasing the production of coarse and juicy feeds. The ministries and departments that provide service for feed production should render them a great deal of assistance. Up to this point the use of less productive technical equipment is a bottleneck in feed procurement. This makes it difficult to observe technological requirements. For the best procurement of hay and haylage it is important to accelerate field drying of grasses by stirring and turning the swathes. But industry still has not arranged for the production of rotation harrow-rakes, swathe turners or other technical equipment.

It is necessary to improve the farms' supply of transportation for large cargoes. Because of their small capacities, the trailers that are produced today do not make it possible to utilize self-propelled feed harvesting equipment effectively, or to observe the established technological conditions for producing hay, haylage and grass meal. Trailers with capacities of 20-40 cubic meters are needed. The development and introduction of new, advanced technologies requires more rapid interchangeability of machines, and their technical and operational specifications must be higher. Unfortunately, industry is extremely slow at replacing the generations of feed harvesting machines.

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## LIVESTOCK

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### DEPUTY MINISTER ON INTENSIFICATION OF LIVESTOCK SECTOR

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 84 pp 3-11

Article by L. Kuznetsov, USSR Deputy Minister of Agriculture: "Raising Intensification of Production of Animal Husbandry Products"

Text In consistently carrying out the agrarian program, the party and government are implementing large-scale measures aimed at improving the logistical equipping of agriculture, strengthening the kolkhoz and sovkhoz economies and solving the social problems of the rural areas. Comrade K.U. Chernenko, in a speech delivered before the All-Union Economic Conference on the Problems of the Agroindustrial Complex, emphasized: "...the party views the concern for developing agriculture not only as an economic but also as a priority socio-economic task." Its practical embodiment is to be found in the country's Food Program being implemented at the present time, which is a most important component part of the party's economic strategy during this modern stage.

During the 12th Five-Year Plan, the average annual production of meat must be raised to 20-20.5 million tons, or increased by 5.2-5.7 million tons compared to the 10th Five-Year Plan, milk -- respectively to 104-106 million tons or by 11.3-13.3 million tons, eggs -- to 78-79 billion units, or by 15-16 billion units. It bears emphasizing that the rates of growth in output must be rather high in the years remaining up until 1990.

The principal methods for solving the established task have been defined. This includes first of all maximum intensification of output production. By 1990 the kolkhozes and sovkhozes must raise the productivity of the cows by an average of 500-600 kilograms and in regions of developed dairy animal husbandry the average annual milk yield must be raised to 4,000 kilograms per cow. The plans call for a reduction in the fattening periods for the animals, for the young cattle stock to be sold at the proper weight conditions -- not lower than 400-500 kilograms at the age of 16-18 months and for the egg production of poultry to be raised.

Following the May (1982) Plenum of the CPSU Central Committee, positive progress was called for in the development of animal husbandry. Last year, for the very first time over the past 10 years, all of the republics coped with their plans for procuring the principal types of animal husbandry products. For 1983 as a whole, the procurements of livestock and poultry increased by 1.5 million tons,

milk -- by 5.4 million tons and eggs -- by 1.8 billion units. This made it possible for enterprises of the meat and dairy industry to produce 1.4 billion rubles worth of products over and above the plan.

The kolkhozes and sovkhoses achieved noticeable improvements in the productivity of their animals. The average milk yield per cow in 1983 was 2,371 kilograms, or 162 kilograms more than in 1982. The live weight of one head of cattle sold to the state for meat purposes increased by 11 kilograms, and that for hogs -- by 4 kilograms. A considerable increase took place last year in the purchases of young cattle stock of raised weight conditions, for which bonuses were added on to the purchase price. For example, the proportion of heavy weight young stock, compared to their overall purchases at kolkhozes and sovkhoses in the Lithuanian SSR, reached 81 percent, Estonian SSR -- 73 and for the country as a whole the percentage of such young stock delivered to meat combines was 49 percent. At kolkhozes and sovkhoses in a majority of the union republics, improvements took place in reproduction of the herd. Greater numbers of calves, young pigs and lambs were obtained on the farms.

Fine rates were recorded during the initial months of this current year. The kolkhozes and sovkhoses achieved further improvements in the productivity of their livestock and poultry and in output production and purchases. The 1st quarter plan for purchases of animal husbandry products was successfully fulfilled. During this period and compared to last year, the state resources were supplied with 306,000 more tons of livestock and poultry or an increase of 7 percent, milk -- 957,000 more tons or 8 percent and eggs -- 479 million units -- or 4 percent more.

At the same time, increases took place in the numbers of livestock and poultry. On 1 April 1984, there were 2.3 million more head of cattle at kolkhozes and sovkhoses than there were the previous year, hogs -- 1.8 million head, sheep and goats -- 2.7 million head and poultry -- 14 million head. This is creating fine prerequisites for further intensifying the production of meat.

The successes achieved by the livestock breeders are beyond dispute. However, they do not provide any basis for indifference or complacency. During 3 years of the five-year plan, a considerable quantity of meat and milk was not supplied to the state compared to the planned tasks. Thus importance is attached to raising the intensity of the branch and, on this basis, ensuring not only fulfillment of the plan for selling animal husbandry products to the state during this current year but also over-fulfilling it in the interest of reducing the indebtedness of the kolkhozes and sovkhoses to the state, which developed during the first 2 years of the five-year plan.

One of the more complicated tasks -- increasing the production of meat. The natural-economic conditions found in our country and the availability of considerable areas of meadows and pasture land are creating opportunities for substantially increasing the feed base, particularly cattle husbandry. At the present time, beef occupies 44 percent of the overall volume of meat production. Such a structure will be maintained for the most part right up until 1990. The plans call for beef production to be raised to 9.5 million tons by the end of the 12th Five-Year Plan, an increase of 2.6 million tons compared to 1983.



A strong reserve for increasing beef production is that of improving organizational work in behalf of the raising and fattening of replacement young cattle stock of dairy and dairy-beef strains, the fattening of adult cattle and also the further development of specialized beef cattle husbandry. In the process, special attention is being given to raising the live weight and weight conditions of the animals being sold for meat purposes, while simultaneously reducing the periods required for the raising and fattening.

Positive experience in the intensive fattening of livestock and in raising the efficiency of beef production has been accumulated in recent years in all regions of the country. The average daily increases in live weight per head of cattle on the best farms, during raising and fattening operations, has reached 1 kilogram. Moreover, the feed expenditures per quintal of increase in live weight do not exceed 500-600 feed units, labor expenditures -- 2.5-4.5 manhours and the production cost for 1 quintal -- 100-120 rubles. Such high results are annually being achieved by the sovkhoses Mir in Brest Oblast, Druzhba in Vologda Oblast, Dubrovskiy in Chelyabinsk Oblast, Dzhetygenskiy in Alma-Ata Oblast, Yumatovskiy in the Bashkir ASSR and by many other farms.

In many regions of the country which have at their disposal adequate supplies of coarse and pasture feed, regions such as the southern Urals, the Far East, the Volga region, western and eastern Siberia and the piedmont and mountainous regions of the republics of Central Asia, the Trans-Caucasus and Kazakhstan, fine opportunities abound for the accelerated development of specialized beef cattle husbandry. A great amount of work has been carried out in this regard in recent years. The number of beef cattle has increased and a breeding base has been created. The operational experience of many specialized farms reveals that in those areas where a progressive technology is being employed in beef cattle husbandry, herd reproduction work has been organized in a fine manner and where year-round maintenance of the animals on fenced pastures has been organized, with use being made of light-weight sheds and coarse and succulent feeds -- profitable operations are the rule. The country's leading beef cattle husbandry farms are obtaining 90-95 calves from each 100 cows and they are selling their fattened young stock for meat purposes at 16-18 months of age and weighing 400-500 kilograms. Fine results in the development of beef cattle husbandry have been achieved by the sovkhoses Pravda in Uralsk Oblast, Kumskiy and Apanasenkovskiy in Stavropol Kray, Aleksandr Nevskiy and Sadovskiy in Novosibirsk Oblast, Sonskiy in Krasnoyarsk Kray, Stepnoy in the Kalmyk ASSR, Ural'skiy and Sputnik in Orenburg Oblast and by many other farms.

The shortcomings in the development of beef cattle husbandry are associated to a large degree with the fact that many farm leaders and specialists tried to transfer elements of the dairy cattle husbandry over to this specialized branch of animal husbandry. Instead of reducing to a maximum the maintenance expenses for the herd through the construction of light weight and cheap shelters for the animals, they erected costly facilities using brick and reinforced concrete, they employed complicated techniques and equipment for the dairy farms and a large portion of the rations for beef cattle consisted of costly feed and particularly concentrates. All of this led to high expenses in both labor and materials per unit of output and, as a result, to a low profitability for beef cattle husbandry.

In solving the task concerned with improving the supply of meat products for the population, an important role is played by swine breeding. In the Food Program, a great amount of attention is being given to the further development of this early maturing branch of animal husbandry. Pork occupies second place following beef in the country's meat balance; it accounts for 34 percent of the overall volume of meat production. The plans call for the production of pork in dressed weight at all categories of farms to be raised to 7-7.3 million tons by 1990, compared to 5.6 million tons in 1983. The planned growth in production must be ensured based upon further intensification in the fattening of hogs and an increase in the size of the slaughtering contingent, particularly through improved reproduction of the herd and improvements in the care of the animals. Increased attention will be given to the modernization and expansion of existing enterprises, to the introduction of a flow line production technology and to converting the kolkhoz and sovkhoz swine breeding farms over to an industrial basis.

Importance is being attached to the fact that the modernization and expansion of farms can be carried out in stages, while steadily increasing the production of pork. Thus, at the Vykhandu Kolkhoz in Vyrusskiy Rayon in the Estonian SSR, as a result of modernization of a swine breeding farm and the introduction of a progressive technology, pork production increased by a factor of 1.5 over the past 7 years. The average daily increase in live weight per head, during fattening and at an age greater than 2 months, increased from 476 to 534, labor expenditures per quintal of increase decreased from 15.9 to 9 manhours and feed expenditures amounted to 540 feed units. A sharp increase took place in the profitability of pork production.

Pork production at the Oktyabr' Sovkhoz in Kokchetav Oblast increased by a factor of 2.2 following modernization of the farm. Improvements were carried out in the maintenance of the animals and this had an effect on reproduction of the herd. The yield of young pigs per 100 sows increased from 1,333 to 2,218 head, labor expenditures per quintal of increase in live weight decreased by a factor of 1.7 and feed expenditures -- by a factor of 1.6. Losses were sustained prior to modernization of the farm and now the sovkhoz is realizing 1.2 million rubles worth of profit.

A great amount of work remains to be carried out in connection with raising the operational efficiency of the swine breeding complexes, which are producing 30 percent of the pork at the present time. Considerable reserves are available here. The average daily increase in live weight per head at the best enterprises is 650-690 grams, feed expenditures per quintal of increase amount to 420-430 feed units and labor expenditures -- 2.3-2.6 manhours. At the same time, on the average for swine breeding complexes, these indicators in 1983 amounted to 444 grams, 601 feed units and 8.1 manhours.

In addition to organizing highly intensive swine breeding operations at industrial farms and complexes, a requirement also exists for utilizing more completely the opportunities available for increasing pork production at the kolkhoz and sovkhoz farms, on the subsidiary farms of industrial enterprises and on the private plots of citizens. Over the past 5 years, swine breeding farms have been restored and newly organized at 8,200 farms. Deserving of attention is the experience of a number of oblasts where large-scale



reproduction farms are being organized, farms which provide the kolkhozes and sovkhoses in the various rayons with young hogs for fattening and which also sell them to the population and to subsidiary farms.

A strong reserve for increasing the production of pork is that of inter-strain crossing and hybridization. At the present time, this method of breeding is being employed on more than 12,000 farms, which are obtaining up to 30 million crossbred and hybrid young pigs. This work has been organized well at kolkhozes and sovkhoses in the Ukraine, Belorussia and Moldavia and in Leningrad, Omsk, Kuybyshev and a number of other oblasts. The task consists of increasing in the future the proportion of crossbred and hybrid young stock to 65-67 percent of the number of young pigs obtained.

Improvements in reproduction of the herd and intensive fattening of the young stock are the chief factors for determining the economic efficiency of swine breeding. It is no secret that many farms are still not obtaining more than 9-10 young pigs annually per sow. At the same time, the kolkhozes and sovkhoses in the Lithuanian SSR, for example, are annually obtaining 20 or more young pigs.

In recent years, the proportion of poultry meat in the meat product balance has been raised considerably. During the 10th Five-Year Plan a program was undertaken throughout the country directed mainly towards developing meat poultry production. An extensive program for the construction of poultry factories and breeding and reproduction farms was developed and is now being implemented. Considerable capital investments were allocated for the development of meat poultry production. During the years of the 10th and 11th five-year plans the production of poultry meat increased by a factor of more than 1.6, including by a factor of almost 2.1 in the public sector.

The country's Food Program calls for the production of poultry meat to be raised to 3.4-3.6 million ton (in dressed weight) by 1990, an increase of 0.9-1.1 million tons compared to 1983. Such an increase must be achieved mainly through more complete utilization of existing capabilities, improvements in fattening the poultry, raising the quality of the products and eliminating product losses. The concentration of poultry production based upon inter-farm cooperation and agroindustrial integration and improvements in the organizational forms of administration will undergo further development.

Special attention is being given to increasing the production of broiler meat. During a brief interval of time, from 1975 to 1983, the production of this type of meat increased throughout the country by a factor of almost five. Broiler production is developing at rapid rates in the Belorussian SSR, the Lithuanian SSR, the Latvian SSR, Stavropol and Krasnodar krais and in Leningrad, Moscow, Voronezh, the Crimean, Zaporozhye, Odessa, Tselinograd and a number of other oblasts.

The plans call for a further increase in poultry meat production through expanding the fattening of broilers, placing new capabilities in operation at state, kolkhoz and sovkhos enterprises, further modernization of existing poultry factories and converting over to the cage raising of young stock. The plans also call for a considerable expansion in the capabilities for processing

poultry directly on the farms through the construction of slaughtering departments at newly introduced poultry factories and the modernization of existing departments.

The production of eggs will be increased simultaneously with the development of meat poultry production. During 3 years of the current five-year plan, the average annual production of eggs amounted to 72.6 billion units. This exceeds somewhat the volumes called for in the Food Program.

The measures carried out in recent years directed towards the intensification of poultry production have had a positive effect on the branch's economic indicators. Within the USSR Ptitsprom system, the labor expenditures per quintal of live weight decreased by almost twofold over a period of 8 years and amounted to 9.5 manhours in 1983, feed consumption fell to 530 feed units, including to 398 feed units per quintal of live weight in broilers. The production cost per quintal of meat did not exceed 165 rubles, including for broilers -- 122 rubles.

A great amount of work must be carried out in connection with the intensification of sheep raising and particularly with regard to increasing the dressed weight of sheep sold for meat purposes. Many kolkhozes and sovkhoses in Stavropol Kray and in Rostov, Orenburg, Alma-Ata, Taldy-Kurgan oblasts have accumulated experience in the use of the industrial technology for organizing the fattening of sheeps at mechanized sites. Much has been accomplished in this regard on farms in Siberia. Importance is being attached to disseminating this experience on an extensive scale. An increase in the average live weight of sheep and goats slaughtered for meat purposes, at least to the indicators achieved by the kolkhozes and sovkhoses in Uzbekistan and Turkmenia, will make it possible to increase the production of mutton in dressed weight by 320,000-350,000 tons for the country as a whole.

There are still many reserves available for increasing the production of mutton by improving reproduction of the herd and through further growth in the slaughtering contingent of animals.

An acceleration in the rates for developing sheep raising is associated with further strengthening of the branch's logistical base and particularly feed production, the construction of fattening sites for the final fattening of the animals, an increase in the proportion of brood stock in a herd, improvements in breeding work and the creation of new, more fruitful and early-maturing types and strains of sheep.

The tense tasks for increasing meat production during the two remaining years of the current five-year plan and for the period up to 1990 will require more complete utilization of the reserves available for augmenting the meat resources by means of other types of animals. The country's Food Program calls for an increase in the Production of rabbit meat and more extensive development of horse and reindeer breeding for meat purposes. The kolkhozes and sovkhoses in the Central Asian republics possess the potential for increasing meat production through the development of camel breeding.

Agriculture is confronted by great tasks associated with increasing milk production. The chief direction to be followed for solving these tasks has

been clearly defined -- this consists of more complete utilization of intensive factors and, in particular, increasing the milk productivity of the cows. Many examples could be cited illustrating highly efficient management of dairy cattle husbandry.

The Petrovskiy State Breeding Plant in Leningrad Oblast is achieving a high cow productivity. Here, over the past year, an average of 6,566 kilograms of milk was obtained for 1,050 cows. The farm is a reproducer of highly productive pedigree cattle of the black-variegated strain for many kolkhozes and sovkhozes throughout the country.

The dairy complex of the Kolkhoz imeni Lenin in Novomoskovskiy Rayon in Tula Oblast is distinguished by stable economic indicators. One thousand cows are being maintained on this farm. In 1983 an average of 5,362 kilograms of milk was obtained from each one of them. The feed consumption per kilogram of milk amounted to 1 feed unit, including 0.32 feed units of concentrates. The farm is obtaining 95 calves from each of 100 cows and non-calving young cows available at the beginning of the year. The production cost per quintal of milk last year amounted to 17 rubles. The profitability level for milk production reached 134 percent. The farm received 1,113,000 rubles worth of profit from the sale of milk products.

Reserves for raising the efficiency of dairy animal husbandry are available on practically all of the farms and thus a need exists for making more complete use of the experience of leading workers, in the interest of increasing the productivity of the cows and improving the branch's quality indicators.

An important area for raising the intensity of milk production is that of improving the organization of herd reproduction work, the specialized breeding of young stock and supplying the farms with highly productive cows that are well-suited for the industrial technology. Raising the yield of calves from 80 to 90 head per 100 cows is equivalent to obtaining roughly 500 additional kilograms of milk per cow and increasing the production of calves throughout the country as a whole by 3 million head. This is a realistic task. This requires serious improvements in the work of organizing artificial insemination for the cows and heifers, the introduction of a flow line-departmental system for herd reproduction on an extensive scale and the construction of birthing facilities and calfhouses-veterinary dispensaries at the kolkhozes and sovkhozes.

The operational experience of a number of oblasts and republics reveals that large numbers of young stock are constantly being obtained in those areas where daily concern is being displayed for the problems of herd reproduction and where this work is organized in a skilful manner. Over a period of a number of years, the calf yield per 100 cows on farms in Ivano-Frankovsk, the Crimean and Fergana oblasts has been 91-94 head. Over the past 5 years, more than 50 percent of the farms in Lvov Oblast have obtained 95 or more calves.

This task is particularly urgent in view of the fact that herd reproduction work has still not been organized in a satisfactory manner at many of the kolkhozes and sovkhozes. Many shortcomings persist in the raising of replacement young stock. Approximately 30 percent of the heifers are being inseminated at the age of 2 years or older instead of at 18-20 months of age

and this is delaying the development of the cattle, it is causing additional expenditures and it is increasing the costs for first heifers. At the same time, experience in the proper organization of heifer raising operations is available in all of the union republics. The Lesnoye State Breeding Farm in Leningrad Oblast serves as a fine example of a high level of organization for the raising of heifers. Here the heifers attain a weight of 435 kilograms at 18 months of age and during the past year the milk yield per first heifer reached 5,000 kilograms and more.

During the next few years, the highest increases in milk production must take place in those regions located in the vicinity of large cities and industrial centers. Relatively high rates are being maintained in regions known for their traditional animal husbandry structure, where dairy cattle husbandry and swine breeding predominate. With regard to the republics of Central Asia and the Trans-Caucasus, here the chief task in the future will continue to be that of supplying the population with whole milk and sour milk products.

Considerable importance is being attached to improving the organization of milking operation, the primary processing of milk on the farms, transporting it to enterprises of the dairy industry and also carrying out effective measures aimed at protecting animal husbandry against infectious diseases.

The processing of milk is an important and final technological stage on the farms, the incorrect carrying out of which can sharply lower production efficiency on the whole. Thus the creation on the farms of technological production lines for the processing of milk is an important factor for scientific-technical progress in dairy cattle husbandry. The expenditures by the enterprises for supplying the farms with the equipment required for filtering, cooling and storing the milk, as borne out by practical experience, are repaid within the course of 1.5-2 years. The Ministry of Machine Building for Animal Husbandry and Fodder Production and also Goskomsel'khoztekhnika must furnish agriculture with a great amount of assistance in carrying out this work. A great amount of work remains to be carried out in order to complete, during the 12th Five-Year Plan, the conversion over to accepting milk directly at the kolkhozes and sovkhoses and having the milk shipped by transport equipment of the dairy industry.

The chief condition for determining the intensity of animal husbandry management is that of feed. In recent years the consumption of feed at kolkhozes and sovkhoses throughout the country has been increasing steadily and accordingly increases have taken place in the production of goods. During the 10th Five-Year Plan, the average annual consumption of all types of feed amounted to 313.2 million tons of feed units, compared to 226.8 million tons during the 8th Five-Year Plan, or an increase of 38 percent. Meat production during this same period increased by 44 percent, milk -- by 31 and eggs -- by a factor of more than 2.8. The reduction in the rates of growth in feed resources during the 10th Five-Year Plan and in 1981-1982 affected the output of animal husbandry. The average annual increase in meat production in 1981-1982, compared to the indicators for the 10th Five-Year Plan was only 0.4 million tons and the gross milk yield for this period fell by 0.3 million tons.

The rates of growth in output production are being restrained by insufficient feed being made available for the livestock, the low quality of the feed and by

the lack of balance in the animal rations in terms of the principal nutrients, vitamins and microelements. As a result, the potential available in the country for increasing the productivity of the animals is by no means being utilized fully. In recent years the availability of feed per standard head of cattle has not exceeded 2,600-2,700 feed units annually instead of 2,500-4,000 feed units according to the norm. It is noted that in countries having developed animal husbandry operations, 5,000 or more feed units are being consumed per head.

Over the past 17 years the number of all types of animals in the public sector increased by 34 percent. The increase in feed consumption during this same period amounted to 39 percent, that is, close to the rate of increase in number of animals. Thus feed consumption per standard head has remained essentially at the same level and does not exceed 7-8 feed units daily, of which amount approximately 4-4.5 feed units are used by the animals in the form of maintenance feed and only 3-3.5 feed units -- for the production of goods. This level of feeding makes it possible to obtain 6-7 kilograms of milk daily per cow, or approximately 2,100-2,300 kilograms annually, 350-400 grams of average daily increase in live weight in cattle and 250-300 grams of increase in weight in swine.

Somewhat less than favorable advances have been achieved in the structure of the feed being consumed. The proportion of concentrates in the animal rations has increased considerably, while a noticeable reduction has taken place in the green and pasture feeds, which are rich in easily digestible protein, vitamins and mineral substances. In the winter rations, a reduction has taken place in the proportion of succulent feeds and hay. A shortage of the latter during the winter indoor maintenance period adversely affects the development of young stock and the reproductive function of ruminant animals.

The relatively large increase in the consumption of concentrated feeds is partially explained by higher rates of development for poultry raising and swine breeding, that is, those branches where they constitute the foundation for the rations. During the period from 1970 to 1980, the number of poultry at kolkhozes and sovkhoses increased by more than twofold and the number of swine increased by 8.5 million head. But in addition to the accelerated development of poultry production and swine breeding, the increase in concentrate consumption is associated to a certain degree with the shortage in coarse and succulent feeds, brought on by the unfavorable weather conditions of recent years. In this regard, the kolkhozes and sovkhoses must be allocated additional grain forage from the state resources.

In making more complete use of the potential productivity of the livestock and poultry, an important role will be played by the quality of the feed, especially rations which are balanced in terms of protein, carbohydrates and vitamins. Where the rations are unbalanced or the quality of the feed is low, a sharp increase will take place in the feed expenditures for the production of goods.

Experiments have established the fact that in order to obtain a daily milk yield of 20 kilograms, when feeding 1st, 2d or 3d grade hay to the cows, the consumption of concentrated feed per kilogram of milk is 270, 365 and 500 grams respectively. In other words, in order to obtain the same productivity when 3d grade hay is used, the requirement for concentrated feed is increased by almost twofold.



For 1990, the country's Food Program has called for feed production in the amount of 540-550 million tons of feed units. In the interest of carrying out this task, a great amount of work is being carried out aimed at further intensifying field and meadow-pasture feed production and raising the productivity of all feed lands, such that each farm will be able to satisfy completely the animal husbandry requirements for high value coarse, succulent and pasture feeds.

In the system of measures for intensifying field feed production, importance is being attached to further improving the structure of the areas under crops and expanding the sowings of alfalfa, clover, lupine, soybeans, rape and other high protein crops. This will make it possible to increase considerably the production of plant feed protein and reduce the protein deficit in the animal rations.

Studies by scientific institutes and the experience of leading farms underscore the real opportunity that is available for increasing considerably the productivity of the meadows and pastures. The Food Program has called for an extensive system of measures for radically improving the natural feed lands and expanding the areas of irrigated haying and pasture land. In solving these problems, an important role will be played by the proper organization of seed production for forage crops and grasses.

The agricultural workers must carry out a great amount of work in connection with improving the quality of the feed. The experience of leading farms reveals that nutrient losses decrease sharply in those areas where skilful and efficient use is being made of the logistical base that has been developed for feed production in recent years and where extensive use is being made of progressive technologies for the procurement and storage of feed.

The agricultural organs and the kolkhoz and sovkhos leaders and specialists must implement an extensive construction program for feed storehouses and they must place in operation a considerable number of silage and haylage installations and storehouses for hay, root crops, grain forage, grass meal and briquetted and granulated feed mixtures.

With the intensification of animal husbandry, special importance is attached to those problems concerned with the efficient consumption of grain forage. It is known that grain is utilized most effectively in a mixed feed structure that is balanced in terms of the principal nutrients, vitamins, microelements and other biologically active substances. Compared to the usual grain mixture, each ton of rich mixed feed makes it possible to obtain, as a minimum, 250-300 kilograms of milk, or 30-40 kilograms of pork, or 800-900 eggs.

Thus, within the system of measures for creating a strong feed base for animal husbandry and in addition to increasing the production of mixed feed at state enterprises, an important role is played by the further development of inter-farm, kolkhoz and sovkhos mixed feed plants. At the present time, agriculture already has at its disposal a considerable number of mixed feed enterprises. In the Ukraine, the Moldavian SSR, the Baltic republics, Stavropol and Krasnodar krais and in Rostov, Voronezh and a number of other oblasts, special importance is being attached to the production of mixed feed based upon

internally produced grain forage and industrially produced protein-vitamin additives. Many regions have mixed feed plants, the capabilities of which make it possible to process all of the forage grain being used to feed the livestock and poultry at kolkhozes and sovkhozes.

A most important condition for raising the intensity of animal husbandry output production, in addition to full-value feeding for the livestock and poultry, is that of a high level of selection-breeding work. Our scientists, in close collaboration with leading workers on the kolkhoz and sovkhoz farms, have achieved considerable improvements in the productive qualities of the animals and the breeding base has become stronger. At the present time, practically all of the livestock are of pedigree strains. The number of pure-bred animals has increased substantially. The country presently has a rich gene fund at its disposal for pedigree strains of animals, strains which are characterized by a high genetic potential.

However, by no means is full use being made of this potential and this is explained by substantial shortcomings in the breeding work. Deputy Chairman of the USSR Council of Ministers Z.N. Nuriyev, in an article entitled "The Agroindustrial Complex: Results and Priority Tasks," underscored quite fairly the need for implementing serious improvements in breeding work (see EKONOMIKA SEL'SKOGO KHOZYAYSTVA, No 3, 1984).

The intensification of animal husbandry is imposing new requirements with regard to the organization of breeding work and it is confronting the breeders with the task of developing animal strains and types which will be distinguished by high productivity, good health, resistance to diseases and suitable for industrial technologies.

One priority task of the agricultural organs and leaders and specialists -- expanding the network of breeding farms and ensuring that they are distributed uniformly among the country's zones. The problems concerned with creating a breeding base for the regions of Siberia, the Far East, Kazakhstan and the republics of Central Asia and the Trans-Caucasus warrant special attention.

Simultaneously with organizing new breeding farms and increasing the numbers of highly productive pure-bred livestock, importance is also attached to making extensive use of the best international genetic resources for the purpose of creating new animal types and strains.

In the interest of achieving further quality improvements in dairy cattle husbandry, a program is being implemented throughout the country aimed at achieving more extensive use of Holstein-Friesian cattle, which are characterized by an exceptionally high genetic potential. This work has already been started at many kolkhozes and sovkhozes throughout the country and this has made it possible, on the best farms, to create a herd having a milk productivity level of 6,000-6,500 kilograms of milk. The use of young bulls of the Holstein-Friesian strain for inseminating cows of the black-variegated and pale-yellow strains is furnishing an increase in milk yield (among offspring) of 500-700 kilograms, assuming the use of full-value feeding and good maintenance conditions. Measures are being undertaken in this regard to expand considerably the scope of the activity associated with introducing

this breeding method into production operations. During 1984 alone, approximately 2.5 million cows will be inseminated using bulls of the Holstein-Friesian strain. During the next five-year period, the scale of this work will increase considerably.

For the purpose of implementing a long-term program aimed at improving the breeding resources and ensuring their efficient use, a great amount of work must be carried out in connection with improving considerably the work of the breeding centers and ensuring that they are supplied with modern instruments, equipment and computing equipment.

The intensification of animal husbandry and an acceleration of scientific-technical progress in the branch are inseparably associated with improving the production technology and introducing modern forms for labor organization and wages. The experience of leading farms testifies to the high effectiveness of the flow line-departmental technology for output production and double-shift and double-cycle work organization on the farms.

In recent years the collective contract has been employed extensively on livestock farms. The collective forms for labor organization and wages are being employed most extensively in poultry raising, sheep breeding, swine breeding and in the fattening of cattle. In many regions of the country, this system is presently being introduced into operations in dairy cattle husbandry. It goes without saying that a contract is most effective on farms having a high culture of farming and animal husbandry, in areas where the technology has been worked out, a strong feed base has been created, permanent and highly skilled cadres of personnel are available and the livestock farms and subunits engaging in feed production work have highly productive equipment at their disposal.

All elements of the APK [agroindustrial complex] must carry out a great amount of work in connection with reducing losses during the procurement, transporting and processing of products. The Food Program has called for measures aimed at improving the organization of procurements and accelerating the conversion over to accepting livestock and milk directly on the farms. Of great interest in this regard is the experience accumulated in the Lithuanian SSR. Here, over a period of a number of years, the acceptance of livestock has been taking place at the kolkhozes and sovkhoses, with the meat combines being responsible for transporting the animals. Considerable work in organizing the acceptance of milk directly in the production areas is being carried out in the Estonian SSR, Tajik SSR and in a number of oblasts in the RSFSR and in Belorussia.

The problems concerned with personnel training and placement are considered to represent an important state task. And it is for good reason that the Food Program places emphasis on the fact that the main attention of the party, soviet, economic and professional trade union organs must be directed towards the consistent implementation of measures associated with the social development of the rural areas and bringing about further improvements in the welfare, culture and in the medical and domestic services for the rural inhabitants. An increase in the prestige of labor in agriculture and the assignment of personnel to the kolkhozes and sovkhoses are associated mainly with a solution being found for this problem.



A tremendous amount of work remains to be carried out in connection with raising the general educational level and business skills of farm workers. The plans call for a complex of measures for improving the forms and methods for personnel training, expanding the network of professional-technical schools, creating base farms for them and attracting the best specialists to serve as teachers. The carrying out of the large-scale economic and social tasks advanced by the party and government in the Food Program will make it possible to raise the efficiency of animal husbandry operations and to promote further improvements in the welfare of the Soviet people.

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## LIVESTOCK

### EFFECTIVE CATTLE SHIPMENT SYSTEM PROMOTED IN LITHUANIA

#### Direct Procurement in Farms

Moscow ZHIVOTNOVODSTVO in Russian No 1, Jan 84 pp 11-12

[Article by V. A. Stankyavichyus, LiSSR deputy minister of agriculture:  
"Based on Direct Ties"]

[Text] The republic's agricultural and procurement operations, and meat processing industry are continuously improving the cattle shipping-receiving methods and seeking out new approaches to this process which would best suit state and economic interests. The republic is in the process of working out a major shift with respect to receiving cattle directly in kolkhozes and sovkhoses and shipping them by specialized motor vehicles belonging to enterprises of the meat-processing industry. Moreover, the price for the cattle sold to the state is calculated on the basis of live weight.

As many years of experience show, this method is the most effective, and sufficiently accurate and simple for practical application.

Calculating the cost on the basis of live weight allows the kolkhozes and sovkhoses to exercise to the fullest the advantages of turning over the cattle directly at the farms and that centralized shipment by specialized vehicles belonging to meat combines. This method of selling cattle was first used in the republic in 1967. The initial results demonstrated its positive features. The pick-up of cattle directly at the farms and cattle shipment by specialized vehicles from the meat combines is expanding annually, which is evident from the following facts: if on the average in the 8th Five-Year Plan 5,000 tons of cattle were shipped by specialized transport, 48,200 tons were shipped during the 9th Five-Year Plan, and 224,800 in the 10th. In 1981, this figure amounted to 289,900 tons and in 1982 it was already 305,700 tons.

In addition, 18,000 tons of pedigreed cattle are shipped annually from the republic's farms by the specialized trucks from Plemzhzhivob'yedineniya. Taking this into account, the share of centralized cattle shipment exceeds 75 percent.

Direct pick-up of cattle at the farm is carried out in all 44 rayons and encompasses almost 90 percent of all farms. The size of this operation depends on how the meat combines will be equipped with specialized trucks. In 1973-1983, the republic's agricultural funds allotted 390 cattle trucks for the meat combines.

In order to establish equal responsibility for all sides involved in the surrender of cattle directly at the farms and their shipment by specialized truck from the meat combines, the republic's Ministry of the Meat and Dairy Industry, Ministry of Procurement, and Ministry of Agriculture Jointly developed and approved the regulations.

The main conditions for converting farms to centralized cattle shipping are: the availability of hard-surface roads for the travel of specialized trucks to the cattle shipping and receiving points at any time of year, and the availability of scales, a loading ramp, and premises to fill out documents.

The readiness of farms for shipping and receiving cattle and their transport by specialized truck is determined by an interdepartmental commission that includes representatives from the meat-packing plant, the State Inspection of Purchases and Quality of Agricultural Products, the Agricultural Administration, and the Veterinary Service. The commission draws up an appropriate document about the farm's readiness for such shipment.

The number of cattle that is to be received directly at the farms and shipped by trucks belonging to meat combines is stipulated in the contractual agreement.

Direct pick-up of cattle at farms and their shipment by specialized trucks from the meat-packing plants has a number of positive sides. First, cattle delivery is assured strictly according to schedule, and this makes regular operations for meat combines possible. In addition, the general state of affairs and organization of the sale of cattle is improved. Today there are practically no cattle truck lines at the gates of the republic's meat packing plants. Traumatic injury to animals is reduced to a minimum, which helps to improve the quality of meat and rawhide. Now almost all important rawhide is top quality because almost all the cattle are delivered to the meat combines by specialized trucks which are being quite effectively utilized. With centralization, over 1400 tons of cattle are shipped in one cattle van. At the same time, farm vehicles that are in short supply anyway, are not diverted from production. Centralized transportation of cattle in the republic (according to the data of Scientific Research Institute of Agricultural Economy) lowers the cost of delivery by 40 percent and in instances where the receiving inspector's job is performed by the operator it is 60 percent.

When the cattle are received, farm specialists do not have to accompany the vehicles to the meat combines, and as a result they can devote more time to the solution of the main problem--to raise the production rate of animal husbandry products. Moreover, no cattle-keepers need accompany the cattle. In addition, the fatness of cattle sold to the government is improving. Young cattle stock, that do not meet higher fatness requirement and pigs that do not meet prime grade requirement, remain on the farms for further fattening. To a certain degree, thanks to this process the republic's farms have been selling well-fattened heavy cattle to the state for the last several years, and the Latvian SSR occupies one of the primary places among Soviet republics

for these indicators. The sale of heavy cattle provides a tangible benefit to the farms and industry because meat production is higher and the consumers receive better quality products.

In the republic, a comparatively large number of cattle--20 percent more than general procurement--is purchased from the population by contractual agreement. Direct delivery of cattle, which were purchased from the population at the farms or at procurement points, as well as payment on the basis of live mass best suits the wishes and interests of the suppliers. This is so because they know immediately upon delivery of the cattle their weight, fatness, and the sum of money they will receive for them.

Purchasing the cattle directly in the farms, shipping them by the specialized trucks of the meat combines, and calculating the cost on the basis of live mass promotes a higher level of responsibility by workers of the meat industry for the safety and processing of the cattle. After receiving the cattle at the farm and drawing up the appropriate documents, the cattle become the property of the meat-packing plant which bears the total responsibility for it during transportation, pre-slaughter upkeep, and the mechanics of after-slaughter processing, rather than from the moment the carcass is placed in the freezer as it is done when they were paid by weight and meat quality.

In the republic, measures are being taken to convert completely in 1985-1986 to pick-up of cattle directly at the farms, as well as centralized shipment by specialized trucks of the meat combines. This issue is being jointly decided by the republic's Ministry of Agriculture, the Ministry of Meat and Dairy Industry, and The Ministry of Procurement.

In recent years the republic is also implementing pick-up of milk at farms, as well as shipment by trucks belonging to the milk processing industry. In order to establish a general order and areas of responsibility, the republic's Ministry of Agriculture and the Ministry of Procurement developed and approved provisional regulations concerning direct pick-up of milk from farms. Milk received at the farms is accepted by the milk plant driver-inspector according to a pre-arranged time-table. With each year, the pick-up of milk at farms will be expanding. The volume of the effort, like the pick-up of cattle is being set for each rayon by a joint order of the above mentioned ministries.

We consider a comprehensive approach to be the main principle in the introduction of this milk delivery system at farms, that is, take all the whole milk from the farm and make a return delivery of a specified quantity of skimmed milk.

In fulfilling the decisions of the party and the government concerning the continued expansion of direct ties between the farms and the processing industry, farm workers and meat and dairy industry workers are constantly improving their relationship and are striving to increase direct procurement of products from the farms.

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## Advantages of Centralized Shipping

Moscow EKONOMICHESKAYA GAZETA in Russian No 8, Feb 84 p 19

[Article by G. Litvintsev, SOVETSKAYA LITVA correspondent: "Quickly and Conveniently"]

[Text] At the Kretingale Sovkhoz it is the day for shipping cattle to the combine. Fifteen young bulls, who were being fattened until now, were delivered from the farms in the early morning to the special platform with a ramp and scales. At 9 o'clock sharp, Klaypeda Meat Combine's cattle van appeared. The farm livestock expert and the driver-inspector filled out the certificate on the spot. The entire procedure took less than 30 minutes. The van departed on its return journey.

"Practically all cattle and pigs selected for sale are now shipped from our farm by means of a centralized system," said Yu. Balakauskas, director of the Kretingale Sovkhoz. "Every year we make a contract with the meat combine. Based on this agreement, we arrange truck schedules with the combine's representatives on a monthly basis.

Thus, we receive a kind of a guarantee that all the cattle will be picked up and shipped exactly on schedule; for its part, the farm is obligated to prepare the animals for shipping at the proper time, to maintain the platform in good repair, and to provide a convenient drive-up route for the motor vehicles."

It is not difficult to become convinced that this arrangement is advantageous for the farm. In my presence the sovkhov director, Yu. Balakauskas, and the Klaypeda Rayon's senior livestock expert, I. Freygofas, carried out the following calculations. Last year, the sovkhov shipped 4,000 pigs and 570 heads of cattle. If they had shipped them by their own transport, the farm would have lost 30,000 rubles just from the live cattle's loss of weight en route.

In fact, how was business conducted in the past? The farm shipped the cattle in ordinary trucks. It is true that even then the combine absorbed the cost of shipping. All the same, the sovkhov could not avoid losses. The farms delivered the cattle at their convenience. That is why lines formed frequently at the gates of the enterprise. As a result, the animals lost more weight than normally predicted. It was disadvantageous for the combine as well since the rhythm of the work was broken. In the process of shipping, animal hides were damaged and the enterprise was not able to sell them as top quality.

With the introduction of centralized shipping, conditions for the animals have changed. The estimates of the effect on economy, conducted at Kretingale Sovkhoz, differ very little from the average data obtained by me from the administration of another rayon--Kaunasskiy. For every cattle van

(there are 14-15 head of cattle in each truck) the rayon farms gain 730 rubles, on the average, (with all factors included), and on a single round trip for transporting pigs--around 500 rubles.

The Rokay Kolkhoz--it is in the Kaunasskiy's meat combine zone--maintains a fairly large (13,000 heads) swine breeding complex. Shipment of the animals to the combine is completely centralized.

"Apart from other advantages," said D. Kirshis, senior livestock expert, "this method allows us to sort the pigs on location into categories. Animals which are not chosen for bacon can remain behind for more fattening in order to meet the requirement. As a result, the general volume of production is rising, quality is improving and the farm's revenues grow.

This is the effect resulting from the introduction of centralized animal shipping, which now is standard on Lithuanian SSR farms. It was first applied at the Klaypeda Meat Combine in 1972. Initially, only pigs were shipped in this way, then cattle as well. Presently, the Klaypeda and Kaunas meat combines have a contract to ship cattle with all the farms in the zone. In 1983, more than 18 percent of animals were delivered from the public sector by the centralized method.

The Deputy Minister of LiSSR Meat and Dairy Industry, V. Yuknis, speaks about the future of centralized shipping: "At the end of the five-year plan we plan to pick up 100 percent of all the animals on-site at the farms and to deliver them to the meat combines using our own facilities. To do this, it is necessary to further develop the transport base of the enterprises. In particular, construction has been started in Kaunas on the republic's first specialized motor transport base to service meat and milk combines. In the future, similar motor enterprises will be organized in all the large cities of the republic.

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CSO: 1824/381

## LIVESTOCK

### LIVESTOCK PROCUREMENT, DELIVERY SYSTEM REVIEWED

Moscow PRAVDA in Russian 6 Jun 84 p 2

[Article by I. Fedorus and A. Kharchenko, specialists of the USSR Ministry of the Meat and Dairy Industry: "Directly More Advantageous"]

[Text] A driver of the Vinnitsa automotive base of the Ukrmyasomoltrans association, A. Mazur, drove his vehicle into Bershad. The interfarm fattening enterprise is there. He was to pick up the next batch of young male animals. The farm annually releases up to 5,000 tons of meat. And for several years now the processing workers have been shipping the products to the combine themselves.

The receipt and release of livestock has been efficiently arranged. Before the truck even arrives the group of animals has been formed and the documents have been filled out. The driver checks them, loads his cargo — and he is on his way back. From that moment the responsibility for protecting the animals is born by the processing workers.

"Previously it was necessary to take away many people and vehicles to deliver the products," says the director of the Bershad interfarm enterprise, S. Zhornyak. "Now the meat combine has taken over these concerns. We have no disagreements with them."

Animal husbandry workers like centralized shipment using the transportation of the procurement workers. The farms save money and they utilize their own trucks and labor resources better. And the processing workers? Are they not at a disadvantage? Not at all. They receive the raw material more uniformly and losses of it are reduced. This means that capacities are utilized more effectively.

The example of Belorussia is instructive. Here 72 percent of the meat and 40 percent of the milk are shipped from the farms by centralized means. And this has an appreciable effect on the results.

In Slonimskiy Rayon in Grodno Oblast, for example, 42 tank cars were previously used to transport milk from the farms. The output from the truck was little more than 500 tons per year. After centralized shipment was introduced, approximately the same quantity of deliveries was provided with 29



vehicles. The output doubled and the cost of the shipments decreased by almost one-third.

This is to the credit of both the processing workers and the farms. For a good deal here depends on the kolkhozes and sovkhoses. They have installed equipment for purifying, cooling and storing the milk and they have created laboratories for determining its quality. The sales of first-grade and cooled products have increased and the farms' incomes have grown. And their expenditures on the organization of centralized shipping were recouped in a year and a half.

A good deal of experience in purchasing directly on the farms has been accumulated in the Baltic republics, Moldavia and a number of oblasts of the Russian Federation. But direct ties between the farm and the processing enterprises are not developing actively enough. Yet the Food Program envisions completing this work by the end of the five-year plan. Up to this point only one-fourth of the meat and milk is shipped centrally. What is keeping them from arranging this as they should?

First of all the processing workers do not have enough special transportation equipment. They are not allotted enough capital investments for building garages or a repair base. The specialized transportation of the kolkhozes and sovkhoses is scattered, and it is utilized inefficiently, and not always for its intended purpose.

Here are the statistical data. Only 14 percent of the tank trucks and 22 percent of the cattle trucks are being used for centralized shipments. On the farms of Uzbekistan, for example, there are more than 1,000 vehicles for shipping milk but they have not organized local pickup of it. Frequently the kolkhoz or sovkhos will have the necessary conditions for this, but the procurement organizations have not yet established direct ties because of a shortage of transportation. It has been calculated that there are more than 7,000 such farms in the country.

It would seem that the existing vehicles are not always utilized efficiently either. One should be concerned about concentrating them. This will make it possible to increase the volumes of shipment of meat and milk. The material and technical base of the automotive enterprises of the processing enterprises is weak. Both time and money will be required to strengthen it. But it is also impossible to put off the arrangement of centralized shipping. What can be done? In certain oblasts and republics automotive enterprises of Sel'khoztekhnika and other organizations are enlisted for centralized shipping. This accelerates the establishment of direct ties. It is not a bad idea for the agro-industrial associations to adopt this practice and more actively enlist partners to participate in centralized shipping.

And the transportation equipment that is produced is far from suiting the procurement workers in all ways. The cattle semi-trailers are intended to be used for 8 years, but they do not last even half this long. Many meat combines and automotive enterprises, when they receive new vehicles, immediately turn them over to welders, fitters and carpenters who strengthen the bodies, floors and walls. Moreover, they need livestock transportation

equipment of various capacities and can travel across country better. But so far industry produces only one kind, which is intended for 6 tons.

The situation is no better with milk tankers. The selection is small here as well. All of them can hold basically 3.3 tons. Many farms deliver 2-3 times as much milk as this each day. It would be good to have tankers with trailers and tank semi-trailers. Then it would be possible to maneuver the technical equipment. For instance, when there was less of the products to deliver the vehicles could be used for transporting other cargo.

The question of producing motor vehicles for shipping poultry has been raised repeatedly. The meat combines are forced to adapt the cages, containers and ordinary trucks with sides. The Ministry of the Automotive Industry is in no hurry to satisfy the demands of the processing workers.

But more frequently it happens this way. There is suitable transportation, but the farm is not ready to operate in the new way. There are no approach roads to the farms and they have not equipped the loading sites, the weighing equipment or the containers for cooling and storing milk. How can local procurement of milk be organized under these conditions? Unfortunately, there are still many managers of kolkhozes and sovkhoses who are passive and incompetent when it comes to this. And not enough equipment is being produced. Frequently the technical equipment stands idle because there is no one to repair it.

Of course this is far from always the case. In Belgorod Oblast, for instance, specialists of the dairy industry association investigated all 264 farms. Then they developed plans for central dairies and diagrams for grouping the equipment. Through the efforts of Sel'khoztekhnika and the procurement workers, this equipment has been installed. Now 258 of the farms release milk directly. The oblast agro-industrial association has also solved the transportation problem. Under its instructions, the farms and enterprises of Sel'khoztekhnika turned over more than 100 tankers to the processing workers.

The organization of procurements also requires serious improvement. In certain oblasts of the Russian Federation, Moldavia and the republics of Central Asia agricultural agencies handle procurements. But most of the animals go directly to the meat combines. The procurement offices only issue order-passes. Is this stage not superfluous?

In our opinion, the policy for evaluating the farms' products and the accounts for them can also stand improvement. As we know, there are two methods of receiving livestock: according to the nutritional condition and weight of the animal and according to the weight and quality of the prepared meat. Processing workers prefer the latter method. It is more precise. But there are also those who oppose this method. Apparently we should hurry up and establish a common position here.

The planning of livestock procurement should be more flexible. Here the live weight is used for calculation. But in the majority of regions the animals are received when they are slaughtered. Then it is necessary to reconstruct that live weight artificially, with the help of coefficients. Hence the

imprecision in accounting that is sometimes encountered. Now meat procurements are planned by the quarter. The livestock do not arrive uniformly over the course of this period. Would it not be better to give the assignment for the month? The Ministry of the Meat and Dairy Industry is developing proposals concerning material incentives for farms which fulfill monthly release volumes and improve product quality.

When introducing centralized shipping it would not be a bad idea to take into account the interesting experience of a number of farms and processing enterprises of the Ukraine, where the livestock is received according to hourly schedules. There has been much less idle time of the transportation means while standing at the gates of the meat combines and the production capacities are loaded more uniformly.

Direct ties are advantageous both to the farms and to the procurement agencies, as well as to the state as a whole. This means that all involved parties should devote attention to improving and developing them. The RAPO could display more initiative here. Incidentally, a number of places have accumulated fairly good experience in active participation of agro-industrial associations in the arrangement of centralized shipping.

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CSO: 1824/551

## REGIONAL DEVELOPMENT

### TURKMEN AGRICULTURAL PERFORMANCE ASSESSED

#### APK Commission Report

Ashkhabad TURKMENSKAYA ISKRA in Russian 24 May 84 p 2

[Text] At its regular meeting held 21 May, the commission of the TuSSR Council of Ministers on questions of the agroindustrial complex [APK] reviewed questions concerning work carried out by the Ministry of Agriculture of the republic to reduce unproductive expenditures and losses in agriculture and to introduce a specialized technical servicing of the machine and tractor pool at kolkhozes and sovkhozes, and it heard the report of the council of the Ashkhabad Oblast Agroindustrial Association on organizing the implementation of commission decisions in the agricultural industry.

Commission chairman G. S. Mishchenko, member of the Turkmen CP Central Committee Buro and first deputy chairman of the TuSSR Council of Ministers, presided over the meeting. It was noted that considerable work had been done recently to strengthen control over the efficient utilization of material-monetary funds and to reveal and adopt measures for reducing unproductive expenditures in agriculture. At republic kolkhozes and sovkhozes, 688 audits were performed over the last year. They revealed a number of illegal expenditures, deficiencies and cases of embezzlement. As a result of the measures taken, cattle plagues declined sharply last year. The commission noted, however, that during all of last year, not a single RAPO [rayon industrial association] considered questions concerning wages at kolkhozes, where there are serious violations. The RAPO's are not delving into the reasons for the overexpenditure of seed, fodder and fertilizers and are not eliminating the reasons for losses during the harvest, transport and storage of production. They have been tasked with taking urgent measures to strengthen control.

Despite the work that has been done to assimilate special technical servicing of the machine and tractor pool of kolkhozes and sovkhozes, there are still shortcomings in this area. The 1983 goal for the number of farms assimilating such servicing was not met. Of the planned 651 elementary centers for technical servicing on farms, only 109 were established. Existing machine units for technical servicing on farms are basically used as vehicle transportation. Diagnostic installations are used unsatisfactorily, which frequently leads to the premature repair of equipment.

The corresponding resolutions were adopted for the questions discussed.

At the meeting, the plan for the work of the commission of the TuSSR Council of Ministers Presidium for the second half of 1984 was approved.

#### Republic Agricultural Development Reviewed

Ashkhabad TURKMENSKAYA ISKRA in Russian 22 May 84 pp 1-2

[Article: "APK--Efficient Development"]

[Excerpt] As has already been reported, the meeting of the party-economic aktiv of the republic took place 19 May in Ashkhabad. Comrade M. A. Charyyev, secretary of the Turkmen CP Central Committee, presented a report on the "tasks of party, soviet and economic organs of the republic in carrying out the Food Program in the light of the directions of the All-Union Economic Conference on APK Problems and of the directions and recommendations of Comrade K. U. Chernenko, general secretary of the CPSU Central Committee."

The republic APK, said Comrade Charyyev, now has a developed material-technical base and is well provided with resources per 1,000 hectares of plowed land. Last year alone, the republic's agriculture received 3,900 tractors, more than 1,700 cotton-harvesting machines, about 500 grain-harvesting and silage-harvesting combines and much additional agricultural equipment. Deliveries of mineral fertilizers are increasing. Last year, more than half a billion rubles of capital investment went into developing APK branches, which is 24 percent more than in 1982. During this Five-Year Plan in the republic, 69,000 hectares of new irrigated lands were assimilated and the reclaimed condition was improved on 92,000 hectares.

The result of all these measures was that gross agricultural production increased by 3.4 percent and there was increased production of raw cotton, grain, grapes and all types of output in animal husbandry. There was improvement in some economic indicators for the activity of kolkhozes and sovkhazes. As a result of an increase in purchase prices and the introduction of surcharges on these prices for kolkhozes and sovkhazes operating at a loss or unprofitably, and also in connection with a greater volume of production sales, the monetary income of farms increased. Last year, the profit of agricultural enterprises reached R366 million, 52 percent greater than in 1982. The number of profitable kolkhozes increased by 8 percent and that of unprofitable sovkhazes declined to two-fifths of the 1982 level. The level of profitability of kolkhozes and sovkhazes was 25.5 percent compared to 17.8 percent in 1982.

There was an increase in the rate of social change in rural areas as well as in the volume of construction of projects for housing, cultural and personal services, health and education.

The increase in the volume of agricultural output had a positive effect on the work of the food, meat and dairy and other processing branches of the APK. This is the direct result of the impact of the decisions of the May (1982) CPSU Central Committee Plenum.

Comrade Charyyev further emphasized that in the first 3 years of the Five-Year Plan, production in the republic was below the plan by 100,000 tons of raw cotton, 223,000 tons of grain, 64,000 tons of vegetables, 136,000 tons of cucurbits, 45,000 tons of fruit, 73,000 tons of grapes, 21,000 tons of milk and by 2.5 million eggs.

Despite the ever-increasing importance of the increase in agricultural output for food, cotton was, is and will remain the republic's main crop. We should view the increase in the volume of procurement and the improved quality of raw cotton and cotton fiber as the fulfillment of an international obligation, as the basis for consolidating the economy of our kolkhozes and sovkhoses and for ensuring the stable operation of the country's industry that produces a wide assortment of consumer goods.

Concrete tasks for improving the branch were put before party, soviet and agricultural organs of the republic by the Seventh Plenum of the Turkmen CP Central Committee. Much has already been done. At the same time, we cannot be satisfied with the fact that even last year, when the republic fulfilled the plan for cotton procurement, six farms had yields of less than 10 quintals per hectare, and five of them were in Ashkhabad Oblast. At 46 kolkhozes and sovkhoses, the yield was under 15 quintals.

We were not able to attain the incorporation of progressive agrotechnical methods everywhere, the expenditure of seed is not declining, and socialist competition continues to be organized formally. Insufficient attention is being paid to the organization of contract collectives in cotton cultivation.

In his speech at the All-Union Economic Conference, Comrade M. S. Gorbachev made note of serious shortcomings in corn growing in our republic. Indeed, last year's yield of grain corn declined by 12.5 quintals per hectare compared with 1982, and the plan for production of this very valuable fodder crop was only 61 percent fulfilled. The three-year plan for procurement of grain corn by farms in Mary Oblast was only 20 percent fulfilled and in Ashkhabad Oblast it was 25 percent. And farms in other oblasts fell short in providing corn grain for the mixed-feed industry.

As before, the basic reason for the situation that has developed is insufficient attention to this crop, and as a result, the sowing time is prolonged, salty parcels—often not irrigated—are set aside, and agrotechnology is not observed. As before, industrial methods are incorporated formally.

In working with this crop, the Komsomol of the republic is not experiencing any real help from party committees and soviet and economic organs.

Comrade Charyyev further said that positive changes have been noted in animal husbandry in the republic in recent years. Livestock and poultry numbers are increasing, as is their productivity. The limit of 400 kg of live weight for meat cattle has practically been attained. For the results of the competition of animal breeders during the winter period 1982-1983, the republic was awarded the Honorary Certificate of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol.

At the same time, we have no basis for self-deception. Negative tendencies are showing up in many industry positions. This applies mainly to milk production. But it should not be forgotten that the indicator of milk productivity of cows most clearly characterizes the level of animal husbandry, the condition of veterinary and zootechnical work, and the supply of fodder for animal husbandry.

In recent years, stagnation was also noted in sheep raising, a traditional branch of the republic's agriculture. In the first 3 years of the current Five-Year Plan, there has been a reduction of 8,000 in the number of head of sheep and goats in the public sector. In the first 4 months of the current year alone, losses from livestock plagues amounted to 58,000 head, of which more than 28,000 were in Krasnovodsk Oblast.

The situation in poultry raising is being corrected only slowly. The goals of the Food Program for egg production are not being met because of the low productivity of poultry farms, especially the smaller ones, and because of the untimely assimilation of capacities of poultry-raising factories and sovkhozes.

In implementing our country's agrarian policy, stressed Comrade Charyyev, a certain role belongs to the subsidiary farms of industrial, transport and other enterprises, organizations and institutions as well as private plots. They should be a good help in increasing the production of meat, milk and other food products as well as in improving the supplying of workers and employees. The relative share of subsidiary farms of enterprises and organizations and of private plots in the republic's gross agricultural production is 16 percent, including 56 percent for milk, 19 percent for meat, 38 percent for eggs, 40 percent for wool, 67 percent for potatoes, 19 percent for vegetables and 52 percent for grapes, fruits and berries.

Much attention is being paid to private plots. We must continue and develop this work.

Intensification of agricultural production presupposes an increase in the return on production funds and a reduction in labor input per unit of production obtained. We have still not been able to achieve this.

In accordance with the decisions of the May (1982) CPSU Central Committee Plenum, a system of measures has been put into effect in the country to improve the management of agriculture and other APK sectors. As of the present time in the republic, 5 oblast agroindustrial associations and 44 RAPO's have been created and are functioning, and a commission of the TuSSR Council of Ministers Presidium has been established for APK questions.

The first year of the work of the new administrative organs demonstrated their significant advantages. In many rayons, such questions as the financing and extension of credit to dependent organizations, the drawing up of production-financial plans, the work to assimilate cost accounting and several other questions are being solved in a more timely and competent manner. There was an improved distribution of the public income of kolkhozes for



saving and consumption. Last year, withholding to supplement indivisible funds amounted to R196 million, which is about 1.5 times as much as in the previous year. For republic kolkhozes and sovkhoses as a whole, the increase in labor productivity will surpass the increase in wages.

At the same time, many shortcomings have appeared in the work of the councils of agroindustrial associations. A clear interaction of all branches and a combination of the interests of agricultural enterprises and employees of subdivisions have still not been provided for everywhere, the staffs of branch institutions have not been worked out, and the functions of specialists must be made more concrete.

The question of the redistribution of capital investments between RAPO enterprises and organizations remains complicated and unresolved. The bureaucratic nature of the positions of Goskomsel'khoztekhnika [State Agricultural Equipment Association], the Ministry of Land Reclamation and Water Resources, the Ministry of Rural Construction and other ministries and departments of the republic APK in all republic rayons does not allow RAPO councils to exercise their rights as determined by the CPSU Central Committee Plenum. The Ministry of Agriculture and the councils of oblast and rayon agroindustrial associations are still exercising weak control over the observance of the charter of kolkhozes, as a result of which there have been numerous cases of the violation of the democratic principles for managing the public sector.

The Turkmen CP Central Committee Buro examined the state of this matter at kolkhozes of Mary Oblast, but the noted shortcomings exist in other oblasts as well. It is essential for the obkoms, raykoms, oblispolkoms and rayispolkoms as well as the Ministry of Agriculture and its local organs to increase the efficiency of control over the observance of the basic law of kolkhoz democracy.

Comrade Charyyev further noted that for the purpose of improving the economic operations of republic kolkhozes and sovkhoses operating unprofitably or at a loss, annual surcharges of R20 million altogether on the purchase prices for produce that they turn over to the State have been established for the years 1983 through 1985.

Last year's results show that most of these enterprises improved the indicators for financial operations, reduced the volume of new credit resources and shortened the period for paying back previous credits. At the same time, only the farms of Tashauz Oblast fully used state-allocated funds. For the republic as a whole, of R20 million, R15.8 went into enterprise accounts. The kolkhozes and sovkhoses of Mary Oblast were the worst of all, assimilating less than 72 percent of allocated funds.

The intraorganizational account plays a large role in increasing the efficiency of agricultural production. It is precisely on this basis that high indicators are consistently attained by the kolkhozes Sovet Turkmenistany in Gyaurskiy Rayon, 40 Let TuSSR and Sotsializm in Ashkhabadskiy Rayon, kolkhoz imeni Kuybyshev in Takhtinskiy Rayon, and by the sovkhoses Tedzhen in

Tedzhenskiy Rayon, Kazandzhik in Kazandzhikskiy Rayon, Leninizm Yoly in Gyaurskiy Rayon and many other farms.

Favorable conditions have now been created for the incorporation of the collective contract, the highest form of full cost accounting. This method of organizing and paying for labor makes it possible to raise labor productivity by 15 to 20 percent, to increase output and reduce its production cost, and to put an end to postscripts and mismanagement.

A complex program has been worked out in the republic for introducing the collective contract in all rural production subdivisions by the end of the Five-Year Plan. Last year, 3,500 brigades and production teams, or 25 percent of the total, were working according to the collective-contract system; more than 2,100 collectives went over to the new form this year. At Zakhmet Sovkhoz in Bayram-Aliyskiy Rayon, all 18 brigades are working under a single job authorization with payment according to the final result. There are positive examples in all republic oblasts.

At the same time, not all contract collectives finished 1983 with good results. There are cases of failure to accept collective responsibility. The main reason for this involves the formal approach of farm managers and specialists, their lack of knowledge of all details of the work and their unwillingness to be burdened with additional worries. It is essential for the republic Ministries of Agriculture, the Fruit and Vegetable Industry and the Food Industry, as well as the obkoms, raykoms, soviets of people's deputies and their executive committees to keep the questions of the assimilation of the collective contract under constant control, striving for its incorporation and effective operation everywhere.

To a significant degree, the speaker noted, the effectiveness of the republic APK is determined by the competence, initiative, state of organization and interaction of the ministries and departments comprising it. It must be said right out that in many areas they are not meeting their obligations.

Directly under the Ministry of Agriculture are 222 enterprises and organizations, of which 93 are sovkhozes. These enterprises did not fulfill the production plan in even one type of production, including raw cotton. For a number of types of output, the yield and productivity of animal husbandry declined from the previous year. The plans are not mobilizing collectives to increase agricultural production.

The Ministry of Agriculture is not effectively working to save fuel and energy resources and there are numerous instances of the uncontrolled use of fuel and lubricants. The material and technical base of the association "Turkmensel'khozkhimiya" [Turkmen Agricultural Chemicals] is developing weakly; the amount of full servicing of kolkhozes and sovkhozes with agricultural chemicals is still insignificant, particularly in regard to the application of organic chemicals; and the quality of work performed is low, as is the effectiveness of the use of funds. The ministry staff needs to work seriously on improving the style and methods of managing the sector, especially in economic matters.

The situation is even more complicated in the republic's Ministry of the Fruit and Vegetable Industry. According to last year's results, the plan for the sale of production by ministry enterprises was 85 percent fulfilled; the plan for procurement of fruit and vegetables, 98.7 percent; the plan for the sale of canned fruits and vegetables, 81 percent; the program for contract work, 67 percent; and the plan for deliveries of onions and tomatoes to a Union fund, 80 percent.

There were substantial shortcomings in organizing the work to sell fruits and vegetables to the population, and their quality worsened.

The main partners of kolkhozes and sovkhoses in the APK are the enterprises of Goskomsel'khoztekhnika as well as the organizations for water management and rural construction. The results of the financial-economic activity of these ministries and departments appear more favorable. To a considerable degree, this is explained by the fact that their indicators are not linked to and do not depend upon the final results of the work of agricultural enterprises.

At the same time, the considerable positive work of these subdivisions for the production-technical provision of agricultural output does not always solve the urgent tasks involved in increasing the efficiency of the work of kolkhozes and sovkhoses. The quality of mechanized and repair work as well as of transport and supply services performed by enterprises of Sel'khoztekhnika [Agricultural Equipment Association] evokes considerable criticism, and the rates for these services are not always justified.

In recent years in the republic, the material and technical base of the Ministry of Land Reclamation and Water Resources has been consolidated significantly and the volume of construction work is undergoing intensive growth. The ministry is actively working toward the future and certainly it deserves credit for this.

One hears a lot of complaints against the subdivisions of the Ministry of Rural Construction. In practically none of the APK projects are the standard construction periods being observed, the completion of poultry-raising projects has been delayed excessively and the quality of construction work is low.

To a considerable extent, increased food resources and improved quality of food products depend upon the work of the Ministries of the Food Industry, the Meat and Dairy Industry and Procurement, as well as of the Administration of the Fish Industry and the Turkmen fish industry. The plans for the production and sale of output are being carried out stably under high growth rates for most enterprises of these branches. Much work has been done to put new capacities into operation and to reconstruct enterprises. The assortment of goods produced is expanding and much is being done to improve their quality. At the same time, there are many unsolved problems here as well. Allocated capital investment sums, advanced production technologies and collective forms of organizing and paying for labor are being assimilated only slowly.

Comrade Charyyev further noted that one of the most acute problems under the conditions of our republic is the lack of refrigeration capacities. This was very seriously discussed at the Seventh Plenum of the Turkmen CP Central Committee, but the situation is not improving. At the present time, 40 percent of the republic's requirement for storage facilities has been met, and even less for storage with mechanical cooling.

Many APK departments are involved in the construction of the refrigeration industry, but this work is not being performed with the required persistence and discipline. The time has come to combine the efforts of APK subdivisions in constructing refrigerated storage facilities, to develop a unified scheme for their distribution with consideration given to the needs of the oblasts and cities, to be more persistent in deciding questions involving the allocation of equipment in Union ministries and departments, and to take control of the allocation and assimilation of capital investments.

Large losses of agricultural production are occurring in the republic because of the poor state of packaging operations.

Under the conditions of a large number of suppliers and consumers of APK output and their dispersion over the vast territory of the republic, the condition of mainly agricultural shipments and their timely delivery to the places where they are consumed or stored depend to a considerable degree upon the existence and condition of a highway network and the coordinated work of motor and railroad transport. At the same time, the construction and maintenance of highways in the republic falls short of the requirements of the national economy, their rural network is inadequately developed and their technical condition does not always meet requirements.

The harmonious operation of the APK is possible only when the partners fulfill their contractual obligations in a timely manner and in good quality. In the practice of the work of enterprises and organizations of agroindustrial associations, there are frequent cases of kolkhozes and sovkhoses being cheated and of an unobjective evaluation of the quality of completed work and production for sale.

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## REGIONAL DEVELOPMENT

### PROGRAM FOR REORGANIZING NON-CHERNOZEM ZONE AGRICULTURE EVALUATED

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 6, Jun 84  
pp 33-36

/Article by L. Kochetkov, Candidate of Economic Sciences: "Transforming the Non-Chernozem Zone and the USSR Food Program"/

/Text/ The agricultural workers and workers attached to other branches of the agroindustrial complex in the non-chernozem zone of the RSFSR are making a great contribution towards implementing the USSR Food Program. All of the autonomous republics and oblasts in this zone over-fulfilled their plans for selling grain and animal husbandry products to the state last year and they improved noticeably their many indicators for the production, procurement and processing of agricultural products.

The Russian non-chernozem zone, which occupies the principal portion of the country's overall non-chernozem zone -- from the Baltic shores to the Urals -- includes 29 oblasts and autonomous republics, a territory of 2.8 million square kilometers and a population in excess of 60 million persons. The non-chernozem zone, a vast region for agricultural production, has at its disposal 52 million hectares of agricultural land, of which amount 32 million -- arable land and 15 million -- feed lands. This zone numbers approximately 10,000 kolkhozes, sovkhoses and inter-farm enterprises. This zone produces more than one half of the potatoes, more than one third of the meat, milk, eggs and vegetables in the RSFSR and one fifth of the country's entire gross agricultural output.

Loamy, sandy loam and sandy soils with a raised acidity level and also lightly contoured and water-logged fields predominate in this zone and thus a requirement exists for serious efforts aimed at raising their fertility. At the same time, as borne out by the specialists, the non-chernozem zone possesses favorable opportunities for the intensive development of agriculture: the soil here responds to fertilization and a good amount of precipitation falls within the zone.

In the early 1970's, one third of the kolkhozes and sovkhoses in the non-chernozem zone were obtaining up to 10 quintals of grain per hectare, one fifth of all of the farms were obtaining less than 75 quintals of potatoes per hectare and one fourth -- less than 2,000 kilograms of milk annually per cow. At the same time, the requirements for food goods and raw materials have

increased continually. This is why some urgency is being attached to the problems concerned with improving and achieving all-round development for agriculture in the non-chernozem zone of the RSFSR.

The measures aimed at reorganizing agriculture and other branches of the agroindustrial complex in the non-chernozem zone, the implementation of which began 10 years ago based upon a decision handed down by the CPSU Central Committee and the USSR Council of Ministers, have become an organic part of the USSR Food Program adopted 2 years ago. The passage of time has confirmed both the timeliness and effectiveness of the measures outlined by the party and government. During the all-union economic conference on the problems of the agroindustrial complex, the General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet Comrade Konstantin Ustinovich Chernenko emphasized: "...our party is displaying concern for agricultural development not only as an economic but also as a priority socio-political task."

The long-term and large-scale program for improving and reorganizing agriculture in the non-chernozem zone was thoroughly substantiated and developed further in the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Measures for the Further Development of Agriculture in the Non-Chernozem Zone of the RSFSR" (1974) and in the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Further Development of and Improvements in the Efficiency of Agriculture in the Non-Chernozem Zone of the RSFSR During the 1981-1985 Period" (1981) -- further development and specific definition. This program calls for the following: improvements in soil fertility based upon land reclamation and the use of chemical processes, creation of the conditions required for increasing the production of grain, potatoes, vegetables, flax and feed and for the development of highly productive animal husbandry operations; providing agriculture with a modern logistical base, accelerating the conversion of this branch over to an industrial basis; a broad scope of production, housing and cultural-domestic construction, reorganization of villages and towns into well organized settlements; solutions for the principal social problems in the area of labor, daily routine and culture of kolkhoz members, sovkhoz workers and all agricultural workers in this zone.

By 1990 and compared to the level for 1973-1974 (when this program was adopted), the production of the principal agricultural crops in the non-chernozem zone of the RSFSR must be increased by a factor of 2-2.5. The plans call for grain production to be raised to 43 million tons, flax fiber -- to 380,000 tons, potatoes -- to 42 million tons, meat (in dressed weight) -- to 4 million tons, milk -- to 30 million tons, eggs -- to 22 billion units and wool -- to 25,000 tons. During this current five-year plan, gross agricultural output in the non-chernozem zone of the RSFSR must be increased by 30 percent compared to the level achieved during the 10th Five-Year Plan.

Never before in the entire history of the Russian non-chernozem zone has agriculture here been confronted with such large-scale tasks. However, the party bases its position on the fact that these tasks derive from our requirements and that they conform to the existing material potential and are fully realistic.



Intensification, specialization and maximum improvements in efficiency and quality -- this is the main path to be followed for further developing agriculture throughout the country, including in the non-chernozem zone. "Intensification, the accelerated introduction into production operations of scientific and engineering achievements and the implementation of large-scale all-round programs" pointed out Comrade K.U. Chernenko in a speech delivered before the February (1984) Plenum of the CPSU Central Committee, "all of these factors must in the final analysis raise the productive forces of our society to a new level from the standpoint of quality."

The process of intensification should never be reduced to merely the accumulation of capital. "The chief concern in intensification" emphasized member of the Politburo of the CPSU Central Committee and secretary to the CPSU Central Committee Comrade M.S. Gorbachev during the All-Union Conference on the Problems of the Agroindustrial Complex, "is that of raising the yield of products per unit of available material and financial resources." Hence the discussion here concerns mainly the efficient utilization of tremendous production potential and raising the return from capital investments.

The chief trend in the intensification of and improvements in agricultural production -- extensive land reclamation work that will make it possible to create large tracts of arable land, to concentrate production, to utilize machine equipment in a highly productive manner, to reduce the periods required for the carrying out of field work and to introduce a progressive technology and industrial methods. The importance of land reclamation is borne out by the fact that although reclaimed land constitutes only one seventh of the arable land area, it nevertheless produces one third of all field crop husbandry products.

By 1990, an area of 9-10 million hectares of land must be drained in the non-chernozem zone of the RSFSR, with 7-8 million hectares of this amount by means of closed drainage. This is more than has ever been carried out before throughout the entire country. Irrigation will be employed on an area of 2-2.5 million hectares, chiefly in suburban zones.

Land reclamation work in the non-chernozem zone of the RSFSR is being carried out along a broad front. During the 10th Five-Year Plan, 3.2 million hectares were reclaimed here and during the 11th Five-Year Plan -- state capital investments will be employed for placing in operation 1.8 million hectares of reclaimed land and soil improvement work will be carried out on 2.1 million hectares. New sovkhozes for the production of vegetables and other agricultural products are being created on the newly developed lands and existing ones expanded.

Thus, at the Makeyevskiy Sovkhoz in Ryazan Oblast, on the lands of which a reclamation system is being employed successfully, a hectare of drained land is producing up to 40 quintals of grain, 250 quintals of potatoes, 400-500 quintals of root crops, 75-90 quintals of perennial grass hay, 300-350 quintals of pasture feed -- a total output of more than 400 rubles worth, of which amount 280 rubles represent net profit.

In the Karelian ASSR, up to 35 percent of all field crop husbandry products are being obtained from improved lands, in Leningrad Oblast -- 45 and in Kaliningrad



Oblast -- 95 percent. The goal of 30-40 quintals of grain per hectare was obtained long ago by the Novaya Zhizn' Kolkhoz in Tula Oblast, the Rodina Kolkhoz in Vologda Oblast, The Sverdlovskiy Sovkhoz in the Mordovian ASSR and by the Romodanovo Sovkhoz in Smolensk Oblast.

At the same time, many kolkhozes and sovkhoses in the non-chernozem zone are not developing fully their reclaimed lands and great fluctuations persist in the cropping power on irrigated tracts of land. Although farms in Moscow Oblast are obtaining up to 450 quintals of vegetables per hectare under irrigation conditions, in neighboring oblasts -- only 80-100 quintals per hectare. In Kalinin Oblast, for example, the kolkhozes imeni Timiryazev and Druzhba in Kalyazinskiy Rayon, the Okovetskiy Sovkhoz in Selizharovskiy Rayon are obtaining only 6-8 quintals of grain and 50 quintals of potatoes per hectare. Proper responsibility is not being displayed for the reclaimed lands on these farms, peat is being applied to the soil in pure form and this is not producing the desired effect. Quite often the sowing and harvesting schedules are not being followed.

The effectiveness of reclaimed lands is dependent to a considerable degree upon the efficient use of mineral fertilizers. In the non-chernozem zone, with its acid soils, the incorrect application of mineral fertilizers not only does not produce the desired effect but in fact it can even cause harm. For example, some kolkhozes and sovkhoses in Kalinin Oblast applied a ton of mineral fertilizer per hectare and obtained not more than 15 quintals of grain and even fewer quantities of potatoes and grasses than earlier. It turned out that the application of mineral fertilizers intensified the acidity level in the soils, almost no liming was carried out and even if lime was applied it was done so in small dosages or distributed irregularly on the fields.

The kolkhozes and sovkhoses in the non-chernozem zone of the RSFSR are presently being supplied with almost 2.5 times more mineral fertilizer than the entire Russian Federation received 10 years ago and during the next few years they will be supplied with even more. In 1985 the deliveries of mineral fertilizer to farms in this zone will amount to 6.7 million tons (in a conversion for nutrients), or greater by a factor of 1.5 than at the beginning of the five-year plan. The effective utilization of mineral fertilizer, in combination with organic fertilizer, is of priority importance for the non-chernozem zone.

Organic fertilizer is still being applied to the soil in small amounts on many farms in the non-chernozem zone. Insufficient use is being made of still another reserve -- local calcareous tuff, which in terms of quality often surpasses imported crushed limestone. Compared to the farms in Moscow and Orel oblasts, which increased their applications of organic fertilizer to the soil, those in Kirov Oblast decreased the number of such applications. And in Bryansk, Vladimir and Kaluga oblasts, mineral fertilizer was applied in an irregular manner on one half of the areas in behalf of this year's crops. The acid soils in Yaroslavl and Perm oblasts are being limed very slowly.

A most important condition for intensifying agricultural production is that of introducing the achievements of scientific-technical progress, increasing the deliveries of highly productive machines and mechanisms to agriculture, raising the power-worker ratio at kolkhozes and sovkhoses and employing machine systems in farming and animal husbandry.

In the non-chernozem zone, where the kolkhozes and sovkhozes are constantly being supplied with increasing numbers of machines and mechanisms and where there is a shortage of workers, especially machine operators, great importance is attached to the efficient use of equipment through the organization, based upon collective contracts, of all-round mechanized detachments which carry out an entire cycle of technological operations. In the non-chernozem zone of the RSFSR, such detachments are found extensively in potato production, sheep raising, flax production, feed procurement work and in other agricultural operations. For example, a typical mechanized potato planting complex at the Rossiya Kolkhoz in Ryzan Oblast includes three teams engaged in the planting of potatoes and teams for preparing the soil and for providing technical and cultural-domestic services. A great amount of experience in mechanized operations has been accumulated by the potato growers in Bryansk Oblast, where more than 600 mechanized teams of complexes and detachments have been created. Mechanized detachments, brigades and teams in Vladimir Oblast are carrying out feed procurement work in an outstanding manner.

An effective form for work organization is that of non-schedule cost accounting all-round mechanized detachments. Such a detachment, for example, at the Kolkhoz imeni Lenin in Dzerzhinskiy Rayon in Kaluga Oblast consists of three teams equipped with 60 tractors and 15 grain harvesting combines. This detachment processes approximately 2,000 hectares of grain sowings, 550 hectares of flax and more than 800 hectares of perennial grasses.

The reorganization of the non-chernozem zone is associated with achieving solutions for many large-scale problems, one of the most important of which is construction. The Food Program is continuing the program aimed at further strengthening the logistical base of the agroindustrial complex.

Large capital investments are being employed for the reorganization of agriculture in the non-chernozem zone of the RSFSR. During the past two five-year plans alone, the capital investments exceeded 50 billion rubles, including 31 billion rubles during the 10th Five-Year Plan, that is, during the 10th Five-Year Plan alone they amounted to almost as much as was employed during the 7th, 8th and 9th five-year plans taken together, or slightly less than was invested in the development of the virgin and long-fallow lands. During the 11th Five-Year Plan, the capital investments for this zone will amount to more than 39 billion rubles.

The plans also call for large-scale measures to be carried out in the non-chernozem zone in connection with developing the capabilities of the light, food, meat and dairy, mixed feed and other branches of industry. During the 10th Five-Year Plan, 9.4 billion rubles were invested in these branches and 15 billion, or 1.6 times more, are being allocated for the 1981-1985 period. However, it bears mentioning that the capital investments so allocated are not being utilized fully. In particular, the plans for building elevators, mills and mixed feed plants are systematically not being carried out, including some in the non-chernozem zone of the RSFSR. Some pilot projects are being postponed from year to year and the amount of unfinished construction is considerable.

At the present time, owing to a reduction in the network of procurement points, a considerable increase has taken place in the delivery distances for

agricultural products from the kolkhozes and sovkhoses, especially animal husbandry and fruit and vegetable products. In this regard, the task has been assigned of locating the processing enterprises as close as possible to the raw material production areas.

The growth in the scales of rural construction in the non-chernozem zone became possible owing mainly to the fact that an industrial base was created which makes it possible to solve more complicated tasks. The cadres of construction personnel increased in number and accumulated greater experience.

One of the most difficult sectors of rural construction is that of installing highways or, as they are commonly referred to "vital arteries of the rural areas." A considerable volume of road work is being carried out in Sverdlov Oblast. In Kostroma Oblast, the organizations of other departments are being attracted to participating in this work. The plans for the current five-year plan call for all of the rayon centers and the central farmsteads of farms to be connected by hard surface roads.

Improvements are being achieved in the use of equipment during construction operations. For the non-chernozem zone of the RSFSR as a whole, the equipment is presently being operated 10-11 hours daily and in the Mordovian ASSR -- 14 hours daily. But there are still many shortcomings in road construction. There is no service for the operation of intra-farm roads, they are not being managed properly and each year this adversely affects many grain receiving enterprises, especially during the peak of procurement operations.

A strong contribution towards the reorganization of the non-chernozem zone must be made by the agricultural science and particularly by the recently created branch of VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ for the non-chernozem zone of the RSFSR and its subordinate scientific-research institutes and breeding centers.

Large agricultural scientific-research and educational institutes of VASKhNIL and the Moscow Agricultural Academy imeni K.A. Timiryazev are located in the central oblasts of the non-chernozem zone of the RSFSR. For example, the farms are receiving a great amount of assistance from a breeding center for special strains in Smolensk Oblast, the principal operational trend of which consists of raising the productivity of the animals and their adaptability to the industrial technology. Many years of study have established the fact that the animals of these strains constitute a truly gold fund of the farms. To a large degree, they meet the requirements of the industrial technology: they possess fine growth energy, they have a high dressed weight and they furnish tasty meat. The milk yield of the Shvitskaya strain exceeds 4,800 kilograms annually and that of the Sychevskaya strain -- 5,000 kilograms with a fat content of up to 3.8 percent.

The Pamyat' Il'icha Kolkhoz in Shchelkovskiy Rayon in Moscow Oblast serves as a fine example of the practical use of scientific achievements and leading experience. In feed production, extensive use is being made here of the fermenting of straw by yeast, crushing grain prior to feeding and in milking -- a unit for the mechanical massaging of the udders of first heifers and a manipulator on the Tandem milking unit. A new and highly efficient disinfectant-washing preparation for dairy equipment, developed by scientists at the Moscow Agricultural Academy imeni K.A. Timiryazev, has been tested at the farm. By introducing new equipment and efficient methods for organizing production, the workers on farms of this kolkhoz, over a period of 20 years,

raised labor productivity by a factor of more than 10. Here one milkmaid today services 103 cows instead of 12 as was formerly the case.

Simultaneously with intensification, the process of specialization, concentration and cooperation in agricultural production, based upon an expansion of inter-farm and inter-branch relationships, is actively taking place in the non-chernozem zone. A poultry factor is a typical specialized agricultural enterprise operating on an industrial basis. The Brattsevsckaya, Tomlino and Glebovskaya poultry factories, the largest in the country, are today each producing more than 200 million eggs annually; they are furnishing more than 95 percent of the eggs and almost 100 percent of all meat production in Moscow Oblast. The state poultry factories, similar to the large livestock complexes, are being supplied regularly with mixed feed produced by enterprises of the USSR Ministry of Procurements. Hence the successes achieved by the livestock breeders are largely the result of the work performed by workers attached to the mixed feed industry, who in turn are confronted by very responsible tasks concerned with increasing the production and raising the quality of the mixed feed.

Over the past 10 years, the enterprises of the Ministry of Procurements have undergone extensive development in the non-chernozem zone of the RSFSR. The fixed productive capital of grain products enterprises in Ryazan Oblast and in the Mary and Chuvash autonomous republics has increased by almost threefold and in Novgorod Oblast -- by a factor of four. The capacities of the grain dryers in the zone have doubled and in Ryazan, Bryansk and Vladimir oblasts and in the Mary ASSR they have tripled. This year it is possible to dry more than 400,000 tons of grain daily in the non-chernozem zone of the RSFSR.

Increases have taken place in the capacities of the grain cleaning machines and forced ventilation units. The number of vehicle-mounted unloaders has increased by one third and at enterprises in Vologda, Gorkiy, Kaluga, Kostroma and Yaroslavl oblasts it has tripled. In Kalinin Oblast it has increased by a factor of four and in Novgorod Oblast -- by a factor of five. All of this is promoting the continuous acceptance, processing and preservation of grain at a majority of the grain receiving enterprises in the non-chernozem zone of the RSFSR.

At the same time, as mentioned repeatedly in party documents, the development of the logistical base for the procurement and processing enterprises is still lagging behind the growth in the production and procurements of agricultural products. The logistical base for the storage and initial processing of products at kolkhozes and sovkhoses is weak. The distribution of the processing enterprises among the various regions of the country leaves much to be desired.

In the Food Program, emphasis is placed upon the importance of consistently implementing measures directed towards the social development of the rural areas as a most important part of the party's agrarian policies. The program for the social development of the non-chernozem zone of the RSFSR is also being expanded considerably. Approximately 9.9 billion rubles have been allocated for housing and cultural-domestic construction in the rural areas of this zone, or more by a factor of 1.8 than the amount for the 10th Five-Year Plan. The

plans call for the placing in operation of good quality housing, pre-school facilities, clubs, palaces of culture and regional hospitals. The construction volumes for these installations will be increased during the 12th Five-Year Plan. The program for housing and cultural-domestic construction, as carried out in the non-chernozem zone, has noticeably changed the appearance of the rural areas. Of equal importance is the need for improving the daily routine for the agricultural workers and raising the level of services in the rural areas to the municipal level, such that all types of services will become available to each agricultural worker and especially during the period of seasonal agricultural work at field camps. The volume of domestic services in the rural areas is increasing systematically.

The retention of personnel in the rural areas, in addition to their training, is becoming of greater importance and this is emphasized in particular in the Food Program. In the country's non-chernozem zone, where the large industrial centers are located, a natural migration of the rural population, especially youth, is underway into the cities and this is making it difficult for the farms to obtain the required numbers of machine operators. But this is not the only problem. In the non-chernozem zone, for example, in Vologda Oblast, a demographic situation has developed wherein there is a shortage of young women in a number of villages. A majority of them blame their departure on poor working conditions on the farms, where there is a great amount of manual labor, very few days off and poorly organized domestic services. The young women are being followed out of the villages by the young men. However, in this same Vologda Oblast, at the Sovkhoz imeni 50-Letiya SSSR, it is difficult to imagine a time when there would be a shortage of milkmaids. Here it is believed that the youth will not leave a village where excellent working conditions and domestic services have been created and not only do they believe this but in fact they are creating such conditions.

The most far-sighted farm leaders in the non-chernozem zone long ago came to understand that no amount of land reclamation, chemical processes or mechanisms would produce the desired results in the absence of people. Moreover, they recognized that it was necessary to create the required production and domestic conditions for them and to solve the social problems in combination with the economic ones.

A need exists for an all-round approach for solving the problems which arise in the rural areas. The report delivered by Comrade K.U. Chernenko during the June (1983) Plenum of the CPSU Central Committee contains clear and specific directions in this regard: "Agricultural labor must be converted over to an industrial basis in a more energetic manner, its essence enriched and its prestige raised. The rural areas must be reorganized generally and improvements carried out in the housing, domestic and cultural conditions. If these problems are not solved, difficulties will be encountered in attempting to staff the kolkhozes and sovkhozes with skilled cadres of workers and in creating stable collectives on each farm."

The grain receiving and grain processing enterprises of the non-chernozem zone of the RSFSR are confronted by some very serious problems associated with personnel turnover and the training and retention of skilled workers and specialists. The construction of professional-technical schools within the grain products system is being carried out very slowly and this is inhibiting



the planned and skilful training of young workers for the branch. Improvements are required in the work aimed at motivating personnel to remain at their jobs at grain receiving enterprises.

Recently the volumes of housing construction within the Ministry of Procurements system have increased noticeably. Ten years ago, at enterprises in the non-chernozem zone of the RSFSR, housing was placed in operation at the rate of 20,000 square meters annually, 5 years ago -- 60,000 and at the present time -- 70,000 square meters. Grain products enterprises in Leningrad, Vladimir, Kaluga and Kirov oblasts and also in the Karelian ASSR have expanded their housing construction considerably. At the same time, a reduction has taken place in recent years in the volume of housing construction in Moscow and Kalinin oblasts and in the Mary ASSR. The construction of kindergartens, nurseries and other social-domestic installations is lagging behind the requirements. The non-fulfillment of the plans for social development generally, and in the non-chernozem zone of the RSFSR in particular, is adversely affecting the retention of personnel by enterprises. The large program being carried out at the present time for the construction of elevators, mills and mixed feed plants requires high level and rapid training for a considerable number of skilled workers and the creation of good housing and domestic conditions for them.

The great amount of work carried out in the non-chernozem zone of the RSFSR in connection with the intensification of agriculture and the entire agroindustrial complex and the tremendous resources invested in this work have made it possible to raise agricultural production on the whole throughout the zone and yet the return differs greatly among the oblasts and rayons.

If we take just the chief type of agricultural product alone -- grain -- then it bears mentioning that the kolkhozes and sovkhoses in Gorkiy Oblast and the Mordovian ASSR are systematically increasing their production and sale of grain to the state. The farms in Vladimir, Ivanovo, Kaluga, Kirov, Leningrad and Moscow oblasts and also in the Chuvash ASSR are increasing their sale of grain to the state. At the same time, the kolkhozes and sovkhoses in the largest grain-producing oblasts in the non-chernozem zone -- Ryazan, Orel and Tula -- have noticeably decreased their production and sale of grain and some other products to the state over the past 10 years. Use is still not being made in all areas of the favorable opportunities that are available for strengthening the farm economies, there are many backward kolkhozes and sovkhoses and in some areas they do not take into account the fact that the chief means for increasing grain production and procurements is that of raising the cropping power, improving the structure of the grain fields and reducing losses during harvest operations and storage.

Agroindustrial associations play an important role in raising the efficiency of agricultural production, strengthening the kolkhoz and sovkhos economies and increasing the return from large capital investments.

The initial experience of rayon agroindustrial associations testifies to the fact that their creation has made it possible to define more specifically the management of farms and enterprises and to raise their efficiency. Industrious and enterprising work is being carried out, for example, at the Arzamas RAPO /rayon agroindustrial association/ in Gorkiy Oblast, the Novomoskovsk RAPO in Tula Oblast, the Ramenskoye RAPO in Moscow Oblast and the Pronsk RAPO in

Ryazan Oblast. They led the campaign by rural workers to develop cost accounting, the collective contracts and to strengthen the farm economies and they are attaching priority importance to the economic coordination of the interests of the kolkhozes, sovkhozes and their partners, to strengthening inter-branch relationships and to developing the socialist competition. The grain receiving and grain processing enterprises attached to rayon agroindustrial associations and also goszagotinspektsiya are playing a notable role in all of this work.

Certainly, not all of the RAPO councils have clearly defined the means for solving their chief tasks. For example, during the council meetings of some RAPO's, discussions often take place on matters of a minor or secondary nature or on the reports by specialists concerning the fulfillment of their tasks, whereas the principal problems associated with ensuring fulfillment of the production and procurement plans for agricultural products, improving inter-branch relationships and improving the farm economies are ignored. But the agroindustrial associations are increasing in strength and experience and they are acquiring confidence in the measures adopted by the party for improving management in the rural areas. The workers attached to goszagotinspektsiya must furnish them with maximum assistance in this regard.\*

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\* For conclusion see issue No 8.



## AGRO-ECONOMICS AND ORGANIZATION

### ROUND TABLE DISCUSSION AIRS PRIVATE PLOT PROBLEMS

Moscow SEL'SKAYA NOV' in Russian No 6, Jun 84 pp 10-13

[Round-table discussion: "What Do We Expect from the Private Subsidiary Farm?"]

[Text] The private subsidiary farm, with all its successes, difficulties and problems, is drawing more and more constant attention to itself. And this is predictable: today 35 million families are included in the "orbit" of the LPKh [Private subsidiary farm]. The state of affairs on the private subsidiary farm improved appreciably after the well-known decree of the party and government. But there are still some unsolved problems. They were discussed at the "round table" in the editorial offices where agrarian experts gathered -- economists, jurists and also workers of the USSR Ministry of Agriculture and architects.

Participating in the round-table discussion were:

M. Kh. Atabayev -- head specialist of the technical division of the TsNIIEPgrazhdansel'stroy; V. R. Belen'kin -- chief of the sector for economic problems of population distribution of the All-Union Scientific Research Institute of Economics of Agriculture, candidate of economic sciences; V. A. Bogdanovskiy -- chief of the sector for rural social development of the All-Russian Scientific Research Institute of Economics, Labor and Management in Agriculture, secretary of the council for rural social development under the presidium of VASKhNIL, candidate of economic sciences; E. B. Gilinskaya -- chief of the sector for income and consumption of the Central Economics Scientific Research Institute under the RSFSR Gosplan, candidate of economic sciences; V. A. Yerofeyevskiy -- senior legal consultant of the legal administration of the USSR Ministry of Agriculture; M. I. Kozyr' -- chief of the sector for legal problems of agriculture of the Institute of State and Law of the USSR Academy of Sciences, professor, doctor of jurisprudence; T. Ye. Kuznetsova -- senior scientific associate of the sector for problems related to overcoming socio-economic differences between the city and the villages of the Institute of Economics of the USSR Academy of Sciences, candidate of economic sciences; I. Kh. Rayg -- senior scientific associate of the Institute of Economics of the Estonian SSR Academy of Sciences, candidate of economic

sciences; V. I. Sidorenko -- deputy chief of the main board of subsidiary enterprises and industries and subsidiary and private farms of the USSR Ministry of Agriculture; N. M. Sogomonyan -- chief of the division for residential buildings of the TsNIIEPgrazhdansel'stroy, candidate of architecture; G. I. Shnelev -- chief of the sector for agrarian problems of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences, chairman of the VASKhNIL section, "Development of Private Subsidiary Farms," doctor of economic sciences.

The questions introduced for discussion at the round table were raised in letters from our readers:

G. Ya. Alimov from Kanevskaya station in Krasnodar Kray; G. A. Vozzheva from the village of Avach in Kamchatka Oblast; V. A. Zykova from the village of Primorsk in Volgograd Oblast; L. V. Ivanova from the Znamenskiy Sovkhoz in Zaporozhye Oblast; G. A. Mazurik from Kokchetav; V. I. Migashko from the village of Rybachiy in Maritime Kray; V. I. Podudalov from the Za mir kolkhoz in Crimea Oblast; V. K. Ryazanova from the Kommunar Sovkhoz in Ryazan Oblast; Z. S. Sayanov from the village of Shtanda in the Bashkir ASSR; A. V. Semenova from the village of Ananyevo in the Kirghiz SSR; L. V. Tishchenko from the Dalniy grain sovkhoz in Turgay Oblast; the Timofeyev family from Astrakhan; V. A. Shmakov from Shelkovichikh station in Novosibirsk Oblast, and many others.

Lines from the readers' letters:

"... I am a kolkhoz member, I work as an electrician, and my wife is a field worker; our son is serving in the Soviet Army, our daughter is studying in a tekhnikum, and my mother is on a pension. We have a farmstead plot in which we plant vegetables: tomatoes, cucumbers and radishes. But the rural council prohibits us from selling our surplus on the kolkhoz markets. Is this right?..."

"... We work hard and conscientiously on the kolkhoz, and in our free time we raise early cabbage on our farmstead plots, which we take to the rayon procurement offices and sell on the kolkhoz market ... We all raise several other crops as well (garlic, onions, cucumbers, corn and beets).

"We have hothouses (so-called) for raising seedlings, but the chairman of the sovkhoz has waged a battle against the "cabbage growers," as he calls us. At a general meeting of the kolkhoz members he "nailed" everyone who is engaging in raising cabbage to the "cross of disgrace." Then he called the procurator and called in several kolkhoz brigade leaders and specialists for a "conversation." It was clearly stated that we were considered scoundrels and that our incomes are not earned..."

"... We work on a sovkhoz. We have farmstead plots on which we raise all kinds of crops: vegetables and other garden crops, including flowers. Today, 26 April, the chairman of the rayispolkom and the director of the sovkhoz toured our yards and severely warned us: "Plant only for yourselves; do not plant anything extra: no cucumbers, no tomatoes and no potatoes, and particularly no flowers: plant only the minimal quantity. Nothing may be sold on the market ..."

" ... There are no receiving points in our rayon. We plant only a little. But in the autumn procurement workers could come to the and to us, and also in April when the apricots are ripening. We have many single pensioners who do not haul or carry the crops they have raised to the market, and there are surpluses. But instead of procurement workers, "wheeler-dealers" come to us and buy everything at the cheapest possible prices ..."

" ... An indispensable condition for increasing the production of products on LPKh's, as in public production, is specialization ... It is wrong to make the owner decide what and how much to raise. For example, why make someone dig up a cherry orchard and, under some plausible pretext, suggest that they raise one crop or another? What will this provide for our society? There is only one answer: in this example it will raise the prices of cherries ..."

" ... My husband and I work on a sovkhos. I work with calves and he handles adult animals. For 3 years in a row we have turned over to the state 1.5 tons of meat and 1,000 liters of milk, and for the sovkhos dining room and the kindergarten we provide 3,000-4,000 eggs. You write in your magazine that on other farms they allot mixed feeds in exchange for the meat and milk that is provided, but they give us absolutely nothing. They do not assign us haying land either. All right -- nearby is a city; we take milk to the people and they give us food scraps ..."

SEL'SKAYA NOV': The subject of our discussion was dictated by letters from the magazine's readers and its supplement "Private Farming" as well as by responses to articles in SEL'SKAYA NOV', particularly a number of articles by M. Fedotova.

Some of the questions pertain to material and technical support for the LPKh. These are very important questions, but there is probably no subject for discussion here. Our common task is to provoke the corresponding departments and enterprises to respond better to the needs of the private subsidiary farm and collective gardening and orchard growing.

Another group of questions pertains to the economic, legal and social aspects of the functioning of the LPKh. There is no single point of view regarding some of them, and they are interpreted and resolved in various ways in different places. This complicates the economic situation and the moral climate around the LPKh and, in the final analysis, has a negative effect on the production of these products which we need.

For example, we do not have sufficient clarity in our approach to the commercial aspects of the private farm -- should it provide products only for the peasant family itself, or should it produce as much as possible for sale. Hence also the "differences of opinion" regarding specialization of private farming. LPKh owners sometimes encounter considerable difficulties, restrictions and prohibitions when selling their products. Not everything has been arranged smoothly in the interrelations between the LPKh and public production.

These are problems which we should like to discuss at our "round table."

L. Nikiforov: The issues that have been raised here indeed touch on the very essence of the development of the private subsidiary farm. There are no simple, unequivocal answers to them.

The country has various forms of private subsidiary farms: those that are commercial and specialized -- they were formed long ago and will obviously continue to develop in the future; the multibranch farm ("a little of everything"), which are noncommercial by nature and have very little possibility of becoming more commercial in the future; and, finally, the mixed type of farm, as it were.

In the future it will be necessary to strive to expand the overall production volume on the LPKh's and to increase their commercial output. But it seems to me that first of all it is necessary to be concerned about improving the provision of foodstuffs through private subsidiary farms of the rural population itself. And the only part of the products from the LPKh that can and should be commercial is that part which is in excess of the needs of the families which are maintaining the subsidiary farm, that is, the surplus. It is another matter to determine which part this is, what the volume of commercial output should be, and this should be decided by the owners of the LPKh's themselves, and not by somebody from the outside.

G. Shmelev: To the classification of LPKh's provided by Lev Vasil'yevich (commercial, self-supporting and partially commercial), in my opinion, one should add another category -- private subsidiary farms which, while not being commercial in the politico-economic understanding of this word, supply relatives of rural families who live in the city. This is a large group of LPKh's, and one must say that a considerable part of the products leave the rural areas through this channel.

I. Rayg: Allow me to make a small correction regarding the commercial nature. We must proceed from the assumption that the private subsidiary farm and public production of the kolkhozes and sovkhoses comprise a unified whole and have common goals. When increasing the effectiveness of the entire agro-industrial complex it is also necessary to increase the commercial activity of the private subsidiary farm -- within certain limits, of course -- in order to leave something for private consumption. It is absolutely necessary to take regional peculiarities into account here.

V. Bogdanovskiy: In order to produce products, it is necessary to have labor resources. What capabilities do we have at our disposal? We took two oblasts of the Russian nonchernozem zone for our investigation -- Gorkiy and Bryansk.

The work has not been completed yet, but there is some information for contemplation. In these oblasts 36 percent of the rural families consist of one person, 30 percent consist of two people, and only 16 percent consist of three people. There is your labor potential! What kind of growth of the commercial function of the LPKh can one speak of in this region?

I share the viewpoint of Comrade Rayg, that the approach to commercial activity should be deeply differentiated, as generally the policy with respect to the LPKh should be.

There is the danger that if we "press" too strongly for commercial activity of the private farm we might aggravate even more the situation with labor force in public agricultural production. I think that commercial activity should be developed in places where there are labor resources.

V. Belen'kiy: Let us glance back 20 years. At the beginning of the 1960's 42 percent of the country's population lived in cities and 58 percent in rural areas. And practically all of this 58 percent were actively engaged in private farming, they fed themselves, and they delivered some of their products to the market. Add to this the small and medium-sized cities where private subsidiary farming was also developed. If all this is added together and calculated, it turns out that 85 percent of the population provided themselves with some of their agricultural products.

And what is happening now? Today barely 15 percent of the population are satisfying their own needs for food products through LPKh's. Add to this the increasing numbers of population and their increased buying power and you will see that the load on public production has increased many times over during the past 20 years. This means that if we have such a reserve for increasing the production of agricultural products as the private subsidiary farm, we must not suppress it. And, in my opinion, it is incorrect to say that the main function of the LPKh is to provide for itself. I emphasize that in this stage subsidiary farms must have commercial significance.

SEL'SKAYA NOV': Those who do not approve of the direction of some private subsidiary farms toward the production of commercial products have a serious argument: they think that this will lead to excessive prosperity of a certain part of the population, incomes from private farming that are greater than incomes from public production, and, as a result, the kolkhozes and sovkhoses will be placed in a difficult position. How justified are these fears?

E. Gilinskaya: We only have figures for Russia. I will say at once that they do not cause concern that people will be receiving any kind of super-incomes because of private subsidiary farms.

On an average for the RSFSR the family of a worker or employee living in a rural area (including sovkhos workers as well) receives 9.3 percent of his total income from his private farm. And the family of a kolkhoz worker receives 20.1 percent. True, there is a fairly significant group of people for whom the farm serves as a necessary support in order to have the socially recognized minimum income. As a rule, these are kolkhoz workers on pension who live, say, in the remote regions of the nonchernozem zone.

SEL'SKAYA NOV': According to data published in the reference book "The USSR National Economy in 1982," the incomes of the workers and employees (including sovkhos workers) from LPKh's amounted to an average of 3.3 percent of their total income, and the incomes of the kolkhoz workers -- 27.3 percent. These

are average figures for the country. In certain places, for example, in the Baltic republics and Transcaucasia, they are somewhat higher.

E. Gilinskaya: So it is hardly worth talking about any kind of "prosperity." The more so since wages on the kolkhozes and sovkhoses, in spite of a certain increase in recent years, are still somewhat lower than in industrial enterprises.

In connection with what was said here, I should like to make a clarification which pertains to the very concept of "marketability." We think that if the person who consumes the products is not the one who has produced them, they are already marketed to some degree. Even if a peasant has raised products and sent them to the city to his children or if he gives them to his grandchildren who have come to visit.

According to our calculations, in the RSFSR only half of the products of the LPKh's are consumed directly by those who have produced them. And approximately one-fourth of them go for commercial sales in the classical sense of this word.

SEL'SKAYA NOV': Despite a certain divergence in views, it seems that we have all come to the conclusion that in this situation there is obviously no justification for any kind of administrative measures that limit the production of commercial products on LPKh's (of course, we are speaking here about those owners of farmstead plots who are working honorably in public production). But in this case how does one view specialization in private farming? This is not an idle question. No one will try to deny that specialization contributes to increasing production. Yet the desire of certain owners of farmstead plots to increase their productivity through specialization in some places encounters resistance from the local agencies of authority and the administrations of the kolkhozes and sovkhoses. They are "scolded," fined, not allowed in the market, and their farmstead plots are cut up; they are accused of money-grubbing, receiving "unearned incomes" and "incorrect utilization of the land" ...

It is written in the USSR Constitution (article 18): " ... citizens are obliged to utilize rationally the plots of land that are granted to them." But what does "rational" mean when it comes to an LPKh?

I. Makarova: "Rational," "correct" -- this means making sure that the plot is not overgrown with weeds!

M. Kozyr: The law does not say which crops the owner should plant on his farmstead plot. There is no need for this.

G. Shmelev: They produce that for which there is the greatest demand. And this being the case, obviously, the structure of the production of the LPKh is regulated by the producers themselves in keeping with the needs of the society and the demands of the market. And the market, as we know, is a very sensitive barometer of the demand of the population.



I. Rayg: And one cannot but note that the market is taking on a clearly "crop growing" inclination. And why? In particular because farmstead animal husbandry is not as advantageous as crop growing. Today it is not permitted to have even two cows. And a person understands that it is not advantageous to keep one cow. It is another matter to keep two or three. The effect of specialization is manifested here: for the technology for care and feeding are the same. It would seem that it would be expedient to establish the maximum norms for keeping livestock on a private subsidiary farms not in terms of the number of head of individual kinds of livestock, but in conventional figures.

SEL'SKAYA NOV': Judging from the readers' mail, in some places they think that almost the worst "sin" of specialization is to raise vegetables and early salad greens in protected ground -- hothouses, nurseries and under plastic ... The matter is complicated by the different interpretations of what "hothouse" and "plastic covering" mean, and the different approaches to determining their sizes. Union legislation does not contain limitations on the sizes of hothouses or plastic coverings. Maximum sizes for hothouses (20 and 25 square meters) have been established only in the Ukrainian and Belorussian SSR's so far. And nothing is said there about plastic coverings with solar heating. It is possibly because of this lack of agreement in a number of areas that, according to their own understanding, people think that temporary plastic covers with solar heating are the same as permanent hothouses, and demand that they be destroyed if the normatives are not observed. And then, one way or another, they all refer to the figure of 20 square meters which is indicated in the Construction Norms and Rules (SNIP) which were approved by the USSR Gosstroy. There is also some confusion about the standard design for a plastic covering, according to which the height of this covering should be 70 centimeters. People have to work literally on their knees. And if you fasten the plastic higher, you risk getting a fine...

I should like to hear from the specialists who are in attendance here; on what calculations are such norms and standard designs based? And why does the same figure, 20, apply to all climatic zones of the country?

N. Sogomonyan: Before a normative is included in the SNIP, it goes through a long stage of development and coordination. A hothouse is an engineering structure, and therefore a norm is set for its area. But plastic coverings are not hothouses. We do not yet have any specific instructions for designs of hothouses. It will apparently be necessary to develop them.

As for the figure of 20 square meters, I think it needs to be refined. And this refinement must obviously be regional... Unfortunately, we do not have a comprehensive program which could coordinate various areas of the developments for planning and building up rural populated areas.

M. Atabayev: When the norms were created they had in mind that a hothouse on a farmstead plot was intended for obtaining not commercial products, but products for private consumption -- that which goes to the family table -- and it was needed only during the period of time when it was impossible to grow things out in the open. This is probably correct. Because if one is to speak about the commercial output received in hothouses, this would require



resources (metal, glass, energy) which we cannot allot for this today. This is why the size of the hothouse is limited.

As for the plastic covering, as the USSR Ministry of Agriculture explained it to us, it is intended only for the period when frosts are expected.

Rejoinders: But plants under plastic have to be cared for during periods other than when it is not freezing!

It turns out to be a little bit silly: if the plastic is removed from the frame from time to time, there is no violation, but it is forbidden to leave it on the frame during the entire growing period of the plants.

The period when it freezes is not the same around Arkhangelsk as it is near Moscow! And there 20 square meters is clearly insufficient even to provide one's own family with vegetables.

M. Atabayev: I wish to emphasize once again that a hothouse is a permanent structure which has a metal or wood frame and is covered with material that does not conduct heat. The heating can be gas, electric or from solid fuel. You yourselves understand that everything depends on energy.

Question: Is it perhaps possible to have a hothouse without heating it?

M. Atabayev: No, a hothouse must be heated.

Question: Does this mean that there are no norms for anything that is not heated?

M. Atabayev: The owner of a private farm can cover his entire plot with plastic; there are no restrictions on this in the general plan of the farmstead.

SEL'SKAYA NOV': This is a very important clarification.

In concluding the mini-discussion of hothouses that was sparked, I should like to express the hope that the question of their sizes and designs will be reviewed, and that regional differences will be sure to be taken into account.

But new normatives are a matter of the future, and we need early vegetables today. What can be done to make sure that local administrative interests do not lead to a reduction of the production of products on LPKh's? And the editorial mail shows that such a danger exists.

Here, for example, is an excerpt from a curious document entitled "Warning": "... For a number of years you have used your farmstead plot for raising commercial vegetables and thus you have transformed it into a source of wealth and money-grubbing. The ispolkom of the soviet of people's deputies, the sovkhos board of directors and the local trade union committee warn you that for utilizing your farmstead plot for other than its intended purpose ... you will be deprived of the right to use this plot of land."

We are not giving the address from which this document originated because such "warnings" are not unique. They are frequently followed by decisive actions: "cutting up the plots," after which the sections between the farmsteads become overgrown with weeds, and their seeds fly throughout the village ... And there is another circumstance which causes alarm: administrative sanctions are also often applied against people who are working conscientiously on the kolkhoz, sovkhoz or industrial enterprise, and who devote only their free time to their private farm.

M. Kozyr': Such administrative measures are illegal, and procurators should lodge protests against them. It is necessary for the agencies of state authority and management -- the ispolkoms of the rayon soviets of people's deputies and the RAPO councils -- to ensure correct application of the legislation.

As for accusations of money-grubbing, unearned income, and so forth, they have probably been engendered by an incorrect understanding of these terms and of that which lies behind them. It seems to some that a person is drawing too much income from his farmstead plot. But in the legislation there are no limitations on the amount of income that can be obtained from an LPKh. Moreover, there are no taxes on LPKh products. By this the government is encouraging the production of foodstuffs on private farms of the citizens.

SEL'SKAYA NOV': In our opinion, such socially significant terms as "unearned income," "speculative prices," "money-grubbing," and "getting rich" should be given very clear interpretations and be used with great caution ...

M. Kozyr': On the legal level and on the level of normative regulation, it is necessary to establish some criteria: say, that a private subsidiary farm goes beyond what is allowed in this case or that.

B. Belen'kiy: But any legal norms are effective only if they are based on true economic prerequisites. This means that it is necessary to apply some kinds of economic measures in order to provide for correct specialization of public production and the private subsidiary farm, so that they will augment one another. For instance, through the system of procurement prices or the tax system ...

Rejoinder: Many of the problems with the private subsidiary farm are explained simply by poor organization of sales, procurements and trade ... Interblast exchange, finally!

SEL'SKAYA NOV': In our discussion we have come right up against the question: where and how to sell surplus products from private subsidiary farms?

As we know, there are various channels for selling the products of the LPKh: the kolkhoz or sovkhoz under contract, or a state organization; through consumers' cooperative; on the kolkhoz market. If the first is encouraged everywhere, and the second is more or less approved of, or at least no special obstacles are encountered, the third -- the sale of LPKh products on the market -- comes up against all kinds of local administrative restrictions and prohibitions as well as moral censure ...

V. Sidorenko: Figuratively speaking, there are now four buyers standing at the peasant's gate: the kolkhozes and sovkhoses, which purchase meat and milk under contract, the consumers' cooperative, state procurement organizations -- meat combines and dairies -- and, finally, the market. Frequently these four buyers hold competition among themselves: who will purchase more? Who has more rights? And they forget about the fact that the most important concern when organizing private subsidiary farms is increasing the production of agricultural products on them.

On certain kolkhozes and sovkhoses the proportion of livestock purchased from the citizens in the overall volume of procurements is unjustifiably high, and this shows that the managers of these farms are paying less attention to the fulfillment of the plan primarily through public production. Here, in the drive for more rapid fulfillment of the plan, there are violations in the accounts with the citizens for the livestock, and considerable sums are paid in excess of the established procurement prices, to the detriment of the economy of the public farm.

L. Nikiforov: Of course, contractual relations with the kolkhozes and sovkhoses constitute an important area for the development of the private subsidiary farm, but still this is not what determines the basic functions and the prospects of the LPKh. The more so since the development of the system of contracts is limited to the feed possibilities.

As for the commercial function of the private subsidiary farm (I do not deny that it exists; I just do not consider it basic), it seems to me that it should be related primarily to the support of the kolkhoz market. Take a look at what is happening now. As a result of the development of contractual relations with the LPKh (which, in my opinion, exceed the real capabilities of this farm) the kolkhoz market is not as well provided with certain products, for example, potatoes, which has led to an increase in their prices. And yet it is precisely the private subsidiary farms that could best provide the kolkhoz market with produce. The public farms are not capable of taking over this function fully.

In this connection, I would say that one should think about the possibility of increasing the incentives for orienting the private subsidiary farm toward supplying the kolkhoz market and improving the ties between the LPKh and the kolkhoz market.

SEL'SKAYA NOV': But today there is a good deal of unpleasantness for the peasants involved in taking their products to market. Some of them are halted enroute by the GAI (on instructions from the ispolkoms of local soviets). The surnames of others appear on the pages of the local newspapers. Still others are subjected to "suppressive measures".

G. Shmelev: I had a chance to read some letters sent to SEL'SKAYA NOV'. Among them was a letter about a kolkhoz director who was guilty of sitting down on a tractor and replowing his personal kitchen garden. This, of course, is inadmissible arbitrariness.

M. Kozyr': This is an official crime; there is an article concerning it in the Criminal Code. And it is written in the USSR Constitution: "USSR citizens have the right to reimbursement for damage caused by illegal actions of state and public organizations, and also officials when performing their job duties." We do not adequately take advantage of the measures envisioned by the law.

G. Shmelev: When speaking about the sale of fruit and vegetable products of the LPKh, one cannot but mention the weaknesses of our procurement system: there are not enough transportation or storage capacities. Frequently the procurement organizations simply will not risk accepting perishable products contractual relations for crop growing products has not yet been developed.

SEL'SKAYA NOV': And so at our "round table" certain contracts are subjected to criticism, while, conversely, it is recommended that others be introduced... Is there not some contradiction here?

L. Nikiforov: It does not by any means follow from what I said about the orientation of the LPKh to the kolkhoz market that it is not necessary to develop contractual relations with the private subsidiary farm. It is another matter that they must be improved and must take into account the actual capabilities of the private subsidiary farm.

T. Kuznetsova: The very existence and development of the LPKh would be unthinkable if it were separate from public production. But one must keep in mind the relative independence of the LPKh as a special economic form. The relative isolation and independence of the LPKh are reflected in the fact that the families of kolkhoz members, workers and employees themselves select the production areas of the LPKh and work it with their own labor and their own funds, depending on their own capabilities ...

SEL'SKAYA NOV': But their own difficulties arise here. The farm managers have had occasion to hear that if they do not include the products of the LPKh in their plan, "nobody will come to their assistance" ... Where will the cattle owner acquire feed if he has not concluded an agreement? It is now sold, as a rule, to people who deliver products. Will he be allowed to cut hay? And so forth.

M. Kozyr': But even if there is no contract, there is the established obligation of the kolkhoz, for example, to render assistance with feeds to the private subsidiary farm. These provisions have been further developed in the latest decrees of the party and government...

V. Sidorenko: It seems that here one should say a couple of words about what in principle the relations should be between the private subsidiary farms of the citizens and public agricultural production. All of us in the management sphere, and especially in the local areas, must create the necessary conditions and the necessary social climate whereby a person with a private subsidiary farm will strive to produce more products. But where and through which channels they will go -- that is his decision. It is inadmissible to

apply administrative pressure in this issue. That is how it is written in the decrees of the party and the government.

I. Rayg: We must proceed from the notion that the LPKh and public production of the kolkhozes and sovkhozes are a unified whole and have common goals. It is necessary to develop a mechanism of regulation which is capable of maintaining positive tendencies in the development of the private subsidiary farm and maximally eliminating the negative ones.

M. Kozyr': I should like an agrarian lawyer to continue Comrade Rayg's idea.

The private subsidiary farm is an indispensable part of socialist agricultural production. This factual socio-economic aspect of the matter should be reinforced at the level of law. We have a mass of normative documents which in one way or another resolve problems related to working private subsidiary farms. But we do not have a unified normative document of the kind which, from my point of view, the Provisions Concerning the Private Subsidiary Farms of USSR Citizens could be. This document would regulate in their totality, comprehensively, all the main problems of working LPKh's: land use, the range of private facilities, regulation of contractual relations with public production and consumers' cooperation, questions of inheritance of property, and others.

The need for this kind of legal regulation is shown if only by the fact that so far we do not consider -- either in theory or in practice -- the labor spent on private subsidiary farms to be publicly necessary, even when people raise livestock for the kolkhoz under contracts or sell milk to it. This labor is not taken into account when determining the labor participation of the kolkhoz worker in public production or when determining his pension status.

It is quite unjustifiable, in my view, that in rural areas there is a double legal standard for private subsidiary farms: on the one hand -- kolkhoz workers, and on the other -- workers and employees of sovkhozes, and people in general who live in rural areas.

And the legal regulation of contractual relations between the LPKh and the kolkhoz or sovkhoz? Take a look at the standard contract which is the basis for concluding specific agreements for the purchase or fattening of livestock or the purchase of surplus milk from the private subsidiary farm. There is reference to the Civil code regarding questions of the responsibility of the parties. But wait a minute! Will you find this type of contract in the Civil Code or the Basics of Civil Legislation? Of course not. This is a new contractual institution which is born of modern practice, and it has its own peculiarities. Of course, in such a contract it would have been necessary to determine clearly the responsibilities of the parties.

It seems to me that the work itself on the provisions concerning the private subsidiary farm would make it possible, in the first place, to introduce order into existing legislation and fill in certain of its gaps, and, in the second place, to reveal difficult problems which must be contemplated and solved.

V. Yerofeyevskiy: I share Mikhail Ivanovich's point of view. Indeed, many questions of keeping private subsidiary farms require more detailed legal regulation. We have already discussed the confusion that arises when utilizing hothouses, greenhouses and plastic coverings on farmstead plots. There is no clarity in the interpretation of certain issues of land use either, particularly when it comes to the responsibility of the owners of farmstead plots not to commit acts that violate the interests of the neighboring land users (article II of the Basics of Land Legislation). In practice this causes many conflicts.

V. Sidorenko: Existing legislation regarding the LPKh really does need improvement -- Comrade Kozyr' is absolutely right about that. But I cannot agree with him when he says that the labor expended on the private subsidiary farm is still not regarded as socially necessary. All of the directive documents concerning the LPKh emphasize the need to create a social climate everywhere, in which the kolkhoz members, workers, employees and other citizens would feel that by raising cattle and poultry and engaging in garden and orchard growing, they are doing something useful for the state.

Another question -- whether or not to take into account the labor a citizen expends on the LPKh when determining his labor participation in public production and his pension tenure. If a peasant produces products under contract for home labor, it is necessary to do this. Why? Because in this case he is paid only wages according to the existing norms and rates, and the products produced by the home worker actually belong to the enterprise. When the products are sold the kolkhoz or sovkhoz takes all the earnings for itself and creates economic incentive funds. In keeping with the Instructions for Home Labor in Agriculture which were approved by the USSR Minister of Agriculture with the agreement of the central committee of the trade union of agricultural workers (of 1 July 1982), home workers are given labor books after they have actually met the conditions of the labor contract that has been concluded and their labor is counted into the overall labor tenure.

It is another matter to raise cattle on an LPKh under a contract with the enterprise under conditions envisioned by the decree of the CPSU Central Committee and the USSR Council of Ministers of 8 January 1981. The decree envisions payment for the purchased products at prices stipulated in the agreement, but they cannot be higher than state procurement prices. It is wrong to total the labor expended raising cattle on the LPKh for which payment is made at state procurement prices with the labor expended in the public enterprise and also to calculate additional earnings. In this case it turns out that the citizens who have not participated in the formation of public consumption funds take advantage of them. Moreover, in this case the population is paid twice for raising cattle, since the value of the labor expended on raising cattle and poultry was already envisioned in the state procurement prices. In practice this could lead to a situation in which the workers are less interested in participating actively in public production.

SEL'SKAYA NOV': During the course of our discussion at the "round table" we have expressed serious concerns regarding improvement of the economic and legal mechanism for regulating the activity of the LPKh.



We are expecting responses from our readers and answers that are to the point from the departments that are involved. In the final analysis the private subsidiary farm, its success, and its moral "health" affect all of us -- those of us who have one and those of us who do not. For we are speaking about an important area of work for implementing the Food Program.

In concluding the round-table discussion, the floor was turned over to the reader V. S. Popov from the village of Telma in Brest Oblast:

" ... In and of itself it is excellent that people have begun to discuss at various levels the problems related to the use of farmstead land. Now, it seems to me, there has been significant progress in the very concept of the LPKh. I absolutely and completely support those comrades -- and there are more and more of them -- who consider the farmstead plot to be the 'younger brother' of all of our agriculture.

"I find strange and incomprehensible the position of certain people who think that all people trading on the markets are speculators and thieves. All this is nothing but a tribute to the past, the psychology of the 'high moralists' who frequently do not have the foggiest notion of how one comes by all those little cucumbers, tomatoes and other fruits and vegetables. True, sometimes the owners of farmstead plots do not sell their products at low prices. But they are also not inexpensive in terms of the labor that is invested in them. Of course it is easy for them to hold forth, but the counters of the kolkhoz markets will not start to cave in just because of their banter... Unfortunately there are also those finger-pointers who place the thief who is trying to get a little extra at the expense of society and the honest workers in one heap...

"Prejudice and gross exaggeration under the pretense of protecting public interests only confuse the naive and sow contempt for people who are engaged in a useful cause.

"I as a Soviet person, as a communist, recommended a practice of use of land whereby all people living on it, to the extent of their forces and capabilities, produce a real advantage for society, actual values, and not just words. The most eloquent words are still only words, and you cannot make a pie out of them."

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## AGRO-ECONOMICS AND ORGANIZATION

### SUPPORT FOR PRIVATE SECTOR DEVELOPMENT

Moscow SEL'SKAYA ZHIZN' in Russian 6 Jun 84 p 1

[Article: "From the Peasant Farmstead"]

[Text] In Omsk Oblast the per capita consumption of meat and meat products is increasing noticeably, and a third of these products is being formed from the sale of livestock which are raised in the private subsidiary sector.

Considerable and instructive experience in the organization of farmstead animal husbandry has been gained in the oblast. The population of cattle on farmsteads has increased since 1976 by 25 percent, cows--21 percent, there are half as many more hogs. The private plot on the average produces 373 kg of meat in live weight. While meeting their own needs, rural families sell the surpluses through consumers' cooperatives, supplying cities and workers' settlements.

The people of Omsk not without reason are comparing their present indicators in this sphere with 1976. The decrees of the CPSU Central Committee and the USSR Council of Ministers, which were adopted in 1977, and then in 1981, afforded new means of the development of the production of agricultural products on the private plots of citizens and collective horticulture of workers and employees. And wherever they were able to use properly the afforded opportunities and to approach the matter in a state way, they made noticeable gains in the realization of the reserves of the food supply of the population.

The private subsidiary sector in the Lvov area is playing a noticeable role in the food balance of the oblast. The practice of the production and purchase of livestock, poultry and meat in accordance with contracts of peasant families with kolkhozes and sovkhoses has become widespread here. In conformity with these contracts social production provides farmstead production with concentrates, helps with coarse and succulent fodders and organizes veterinary service. As a result at the Kolkhozes imeni Chapayev of Brodovskiy Rayon, for example, the families turn over young bulls weighing not less than 400 kg.

The forms of interaction of the rural farmstead with the kolkhoz and sovkhos are diverse. In a number of places hay plots are attached to families, the sale of livestock and poultry to the population is increasing, the methods of purchasing surpluses are being improved. Instructive experience of such interaction has been gained in Belorussia, Lithuania, Estonia and several oblasts of

the RSFSR. It is important to create everywhere the necessary conditions for the effective management of the private plot and to unite the interests of the rural farmstead and the collective, society.

Unfortunately, many obstacles and unsettled questions are in the way of the achievement of this goal, about which, in particular, the mail of SEL'SKAYA ZHIZN' attests. The readers inform the newspaper about vacant farmstead lands, on the one hand, and the shortage of fodders for private livestock, on the other, about the lack of small equipment, which facilitates the household labor of rural residents, and the difficulties with the marketing of surpluses of products.

And how often an urgent everyday situation, which requires the intervention of local organs, and at times also a more serious problem are visible behind such signals. Take if only everything that is connected with the technical equipment of the peasant farmstead. The times, when the countryside required of the city matches, soap and textiles, have receded into the distance past. The contemporary rural family, in addition to fashionable furniture, clothing, televisions and refrigerators, needs to no less an extent a motor block with a set of cultivating implements, an electric pump, a gasoline-powered saw, an electric milker and many other means which mechanize farmstead labor.

Here one should not underestimate the role of local initiative. They were able in Belorussia, at the Minsk Tractor Plant, which fulfills the most important state assignments, to produce a motor block for the private subsidiary sector. And although for the present few such units have been produced, the Belorussian peasants were the first to receive them.

Of course, not all republics have such possibilities, but the revision of the range of consumer goods in favor of items, which are actually necessary to the rural farmstead, is a task well within the power of local organs. It is important only to constantly bear in mind the interests and needs of the rural family and to take them into account when planning and managing the national economy.

It is necessary to bear this in mind at all levels of the state structure--from the ministry and oblast soviet executive committee to the board of the kolkhoz and the rural soviet. Especially as much in case of the meeting of the household and everyday demands of the rural family does not require any major decisions. A conscientious and sober-minded approach to the matter and the ability to keep one's word and to be attentive to the requests of fellow villagers are sufficient. Unfortunately, at individual sovkhozes and kolkhozes they does not always approach with the proper sense of responsibility the drawing up of contracts with the population.

Signals about the fact that they are ordering people to turn over milk, without taking into account the needs of the family, are also being received by the editorial office. In striving to "patch the holes" in public animal husbandry, individual kolkhozes and sovkhozes with the knowledge of the rayon management are putting pressure on the private plots, or else are purchasing livestock without any contracts outside the rayon or oblast at increased prices.

Experience shows: farmstead animal husbandry and farming can be developed successfully only when the rural family knows that it will receive on a legal basis a hay field and pasture, that they will allocate to it without fail and will deliver in good time the promised fodders and, finally, that it will be able to sell voluntarily and, at the same time, at the times necessary to it the surpluses of products.

When speaking about the commercial function of the private plant, one must not forget that it first of all enables the peasant family to supply itself with fresh products. In the same Lvov Oblast rural families provide themselves with 98 percent of the potatoes and eggs, 92 percent of the fruit and berries, 87 percent of the milk and 81 percent of the meat.

The private subsidiary sector is an important component of the food complex of the country. A significant role has been assigned to it in the implementation of the USSR Food Program and the accomplishment of the task posed by the party of adequately supplying the population of the country with various food products.

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## AGRICULTURAL MACHINERY AND EQUIPMENT

### ADVANTAGES OF THE DON COMBINE DISCUSSED

Moscow IZVESTIYA in Russian 19 Sep 83 p 2

[Article by Ye. Spiridonov, Rostov-on-Don: "Face to the 'Don'/New Technology and the Inertia of Thought"]

[Editorial note] The development and serial production of new grain harvesting technology on the basis of the Don-1500 and Don-1200 combines is an important national economic task. Taking this into account, IZVESTIYA is taking over public control to make sure that this task is fulfilled.

[Text] Do you know how many days it takes on the average to harvest grain in the agricultural zone? It takes about 1 month. The optimal period is 10 days--mature grain begins to shed after 10 days. This means that by prolonging the harvesting of grains we lose a weighty share of the harvest. An immense degree of labor is expended to raise the grain, and then a portion of it remains in the fields. How can the harvest be collected in the optimal period, preserving each grain?

Today in agriculture there are 750,000 combines and each of them works no more than 150 hectares of grain crops. It would seem that this is a sufficient number, that with such a load they would be able to complete harvesting in 10 days. However, the problem is that present grain-harvesting combines are still characterized by low productivity and are insufficiently dependable. In addition, as we know, during the harvesting period not all machines go out into the fields and there aren't always enough machine operators to sit behind the wheel of the same Niva. Yet it is the most mass-produced combine--of the 100,000 "steppe vessels" manufactured each year 80,000 are Nivas.

"The Niva gets stuck in the grain even when productivity is 25 quintals per hectare," complain the machine operators. "But after all, we now produce 40 and 50 quintals per hectare. Machine builders must produce a combine that will bring natural grain losses to a minimum and that will provide us with good working conditions."

Complaints about the quality of production wound the self-esteem of workers in Rostsel'mash [Rostov Agricultural Machinery Association]. The Niva is already an old lady--her base is the first native self-propelled SK-3 combine,

the production of which was assimilated by the collective in 1958. The Niva combine was developed 10 years ago after secondary modernization. The processing capability of the threshing drum increased from 3 to 5 kilograms of grain mass per second and the ergonomics qualities of the combine improved. But in practical terms the main thing did not change--the hourly productivity and dependability of the machine.

Agricultural workers have long been asking for the development of a combine which would not be inferior to the modern modern models in technical-economic indicators. What can Rostsel'mash offer grain farmers besides the Niva? Its developers, the workers of the Taganrog GSKB [State Special Design Office] of Soyuzkombaynprom [All-Union Combine Industry Association], are firmly convinced that their child should become the combine that grain farmers are longing for--all that is needed is regular modernization. They are not proposing a new design for manufacture. Thus we are forced to drag an old machine to the Olympus of scientific-technical progress.

At the present time the third variant of the modernization is being prepared. Much about it is attractive. There is a modern cab, a bunker with a capacity of 4.5 tons, a more dependable bridge and a new reaper. But the first tests showed that this Niva still does not provide the necessary processing capacity of 7 kilograms per second.

Still, there is some good in everything. In the process of improving the Niva and of observing the operations of imported machines, the specialists of Rostsel'mash gradually developed a clear idea about what the modern grain-harvesting combine should be like. In creative debates with designers they criticize the machine's principle weak points and propose modern approaches.

The general director of the association and now simultaneously deputy minister, Yuriy Aleksandrovich Peskov, who worked as the senior engineer at Rostsel'mash for many years, said directly, upon meeting with the directors of Minsel'khovmash [Ministry of Agricultural Machine Building], "There has been enough of pulling an old machine by the ears; the game is not worth the candle. We must move onto the international level of combine construction--we must develop a promising model which will satisfy the needs of agriculture in 5 and 10 years. If we have our own collective of designers we can develop, in a short period of time, grain-harvesting technology with the needed economic indicators and thus solve a problem that is strategically important for our branch."

The director's arguments got to the heart of the matter. The branch has really been marching in place for many years with regard to the development of new grain-harvesting technology. We must make up for things that have been allowed to go. Minister A. Yezhevskiy decisively signs an order on the development of a new combine and on including a Head Special Design Bureau on Complex Harvesting Machines within Rostsel'mash. The association has a twofold task--to raise the technical level and dependability of the Niva and to develop the basic Don combine with a processing capability of 7-8 kilograms of grain per second and higher.

The collective of designers that became part of the association was headed by Ivan Kireyevich Meshcheryakov. And although people were previously not involved in the elaboration of grain-harvesting combines, they did have a recognized authority in developing machines for harvesting other types of crops. Meshcheryakov was able to organize the collective, which was characterized by an innovative approach to work, a fresh outlook on the problem, and most importantly--a desire to force the development of a machine. In international practice the development of a new combine usually takes no less than 10 years. Rostsel'mash set the task of doing this in half the time, using as the foundation for the technological scheme of the Don ideas presented by the enterprise's specialists, elaborations of branch scientists and the achievements of world combine construction.

When for many years in a row the old Niva kept being redesigned it seemed that new technological decisions in combine building were not possible. All we had to do was take off the blinders and see that there were as many possibilities as one wanted--all you needed was time to introduce them. One idea led to the next. When the threshing drum was enlarged (width of 1.5 millimeters) it became necessary to provide more dependable supports. Thus a standard bridge was developed by the Taganrog GSKB jointly with NATI [State All-Union Scientific Research Institute of Tractors]. The power necessary for operating the Don is provided by a powerful diesel engine developed by the Khar'kov GSKB. In general the designers widely utilized the scientific work done within national and international combine construction. From the very beginning of development of the Don there was participation by scientists from the USSR Academy of Sciences, who have already done a great deal to improve the dependability of machines.

In November 1980 the first designs of the Don made their way to Whatman paper. Already in February 1981 the workers of Rostsel'mash showed a sample of the machine at the USSR VDNKh [Exhibition of Achievements of the National Economy of the USSR]. They were able to manufacture 10 combines for the harvest. Of course these are still "raw material," but it was important to test the new machine model. The Siberian Machine Testing Station of Goskomsel'khoz-tekhnika [State Committee of the Agricultural Equipment Association] confirmed the processing capacity as being 7.3 kilograms of grain per second. This reassured designers about the correctness of their selected direction. Seventeen machines were u t i l i z e d in last year's harvest. The Don threshes 9.3 kilograms of grain mass per second in the Kuban', competing in basic parameters with the American John Deere.

This year 25 combines will be agrotechnically tested. Working next to the Don-1500 is its smaller brother, the Don-1200, which is earmarked for harvesting grains having an average productivity. Within the Don family a machine has appeared to operate in the Non-Chernozem Zone of the country. A set of equipment is being developed that will enable the new machine to harvest corn, sunflowers, sorghum and groats crops after completing grain harvesting. A selection of wide self-propelled and mounted reapers has been prepared for fields varying in productivity. Technology is being planned for harvesting the non-grain portion of the harvest--loaders, standard stack formers and straw fragmenters. In other words, this will include the entire complex of equipment that will enable us to harvest the grain fields without losses.



It is important that the new technology will not remain as test samples alone. Parallel to the elaboration of designs there is a technological preparation of production related to the manufacture of new equipment and progressive materials as well as to the renovation of capacities. The enterprises and organizations of over 30 ministries and departments are working on the Don. The assignment of the Food Program "to begin the serial manufacture of grain harvesting combines with an increased processing capacity in 1986" is being systematically fulfilled.

The Niva has also not been forgotten. Designers and technologists are using some of the discoveries in their work with the Don to modernize the Niva. The dependability of the Niva, for example, is being sharply increased by a new bridge and hydraulic drive as well as a more powerful motor. There have been significant changes in the technology for manufacturing and assembling the combine. The collective is systematically implementing a plan of organizational-technical measures, the goal of which is to certify the Niva at a higher quality category.

Five years from sketches to serial production of complexes of new technology--this is the pace of scientific-technical progress that is very necessary now. After all it is no secret, said Comrade Yu. V. Andropov at the June 1983 Plenum of the CPSU Central Committee, that the situation is poor here with regard to the introduction into practice of scientific and technical achievements. It would seem that the initiative of Rostsel'mash deserves only praise. However, not everyone has recognized the deep meaning of the changes that have taken place in the plant. The inertia of thought has been overcome, but some saw this not as a victory of the collective but as defeat. That which Rostsel'mash should be credited for has become the subject of public criticism--the association's workers chose the easy path, it is said, by promising to modernize the Niva and then developing an entirely new machine. Moreover, they are stopping at nothing--they are doing the work at a rapid pace without wasting time for coordination. The machine is a very complicated one and will not be accepted by machine operators.

The collective of Rostsel'mash today lives with the idea of assimilating the new production. This means the elimination of lags and a clear future for the development of the association. But perhaps, caught up in the new work, specialists of Rostsel'mash are "forcing" the new combine on the village? Nothing of the sort! The elaboration of the Don is in full accord with the requirements of the consumer. This is what is said by Hero of Socialist Labor and link leader of the Put' Lenina Sovkhoz of Peschanokopskiy Rayon, Rostov Oblast, Nina Vasil'yevna Pereverzeva:

"I have been working on the Don-1500 for three seasons now. This year for the first time I sat behind the wheel of a Don-1200. Both machines are very needed by us, by grain farmers. Judge for yourselves--in fewer than 4 days of work with short barley the Don-1500 threshed 4,377 quintals of grain, and the Don-1200--3,184. This is greater by a factor of 1.5 than for any Kolos--a machine that is much more productive than the Niva. I often sat behind the wheel of a Kolos and a Don and compared their operation. In the old combine you circle around once or twice and already feel tired. But with the new combine you don't want to leave the cab--it's cool inside, and the machine drives easily."

Thus the criticism of some VASKhNIL scientists concerning the excessive complexity of the Don is hardly justified. The machine is equipped with a system controlling the action of the basic mechanisms--all of the information about their action is transmitted to the work place of the combine operator. This enables him to predict in time the possible overloads and subsequent breakage. A light goes on, one turns on the combine and a simple mechanism shows precisely which network is causing the problem. The combine operator who services old machinery, on the other hand, must really be an ace--it is not easy to identify problems according to the noise of the machine or to find them within a complex system of networks and units.

The chairman of the Kolkhoz imeni Il'ich of Vasil'kovskiy Rayon, Kiev Oblast, D. Skuratovskiy, writes the following about the practicality and effectiveness of the new machines:

"This year it was necessary to harvest lodged grains and this is difficult work. But this year we did not have any problems with the harvesting of spike crops even with the highest degree of moisture. Under difficult conditions the Don-1500 combine harvested an area of 148 hectares and threshed 5,000 quintals of grain in 12 days, and the Don-1200--4,850 quintals from 131 hectares. This can in no way compare with the yield of the Niva or Kolos. We feel that a rapid organization of production of the Don combine will be a weighty contribution by the collective of the Rostsel'mash association toward the fulfillment of the Food Program."

In the course of three seasons it has been possible to observe the operation of the Don in all of the basic grain-sowing regions. The consumer has developed an attitude of utmost good will toward the new equipment.

"There is no need to ask whether we need the Don," says the deputy minister of agriculture, Nikolay Aleksandrovich Stolbushkin. "We need it. We must just make sure that the design is without a hitch so that it does not become necessary for us to make improvements during serial production, as occurred with the Niva. In addition we are troubled by the weight, energy consumption and price of the machine. We as consumers must prepare machine operators who will operate the new equipment perfectly and with quality. And of course, we must provide dependable servicing for the Don."

Here is the opinion about the new machine of the directors of Goskomsel'khos-tekhnika, who together with the USSR Ministry of Agriculture must present their conclusions by 1 January 1984 concerning the readiness of the machine for serial production.

"The development of a highly productive complex of machines is a principally new approach to harvesting operations and a certain stage in the mechanization of agriculture," says deputy chairman Leonid Alekseyevich Korburt. "We would prefer that the testing material for 1983 provide the possibility of placing the model into serial production."

In a recent resolution of the CPSU Central Committee and the USSR Council of Ministers, "On Measures to Accelerate Scientific-Technical Progress in the National Economy," special emphasis is placed on the necessity in coming years to secure the output of products that reflect the best modern samples with

regard to the their indicators. The serial production of the Don will answer these needs. The new machine, and its production is planned at the rate of 75,000 annually, will significantly raise labor productivity in grain harvesting. It will provide an increase in grain yield by means of curtailing the harvesting period as well as by decreasing direct losses during mowing and threshing. This is a considerable argument in favor of the new machine.

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## AGRICULTURAL MACHINERY AND EQUIPMENT

### PROBLEMS WITH SERIAL PRODUCTION OF NEW COMBINE

Moscow IZVESTIYA in Russian 27 Oct 83 p 2

[Article by Ye. Spiridonov, Rostov-on-Don--Moscow: "Path to the Conveyor"]

[Text] The article, "Face to the 'Don'" (IZVESTIYA, No 261/262 for 1983) discussed the fact that new grain-harvesting equipment will not be delayed in test samples; parallel to the elaboration of machine designs preparations are being made for serial production. "It turns out that a welcome should be prepared for the Don," write our readers. "But won't it happen that the workers of Rostsel'mash will not be able to manage within the indicated time period? Where is the guarantee that in 1986 machines which meet the needs of agriculture will come off the conveyors?"

"Do these doubts have any foundation?" I ask the general director of Rostsel'mash [Rostov Agricultural Machinery Association], Yuriy Aleksandrovich Peskov.

"Of course it is difficult to work on preparations for production and the elaboration of designs at the same time. But this type of approach is economically justified--the time it takes to introduce new technology decreases and invested resources are reimbursed more rapidly."

It is true that the fate of new equipment often goes like this. First the machine is developed and test samples are manufactured. This takes no less than 5 years. Then the same number of years, or even more, are needed by the enterprise to iron out and improve the design. After this preparations are made for serial production. And when it finally becomes time to begin mass production of the new equipment it turns out that it is already antiquated.

In the situation with the Don this type of path is forbidden. The complexity of the machine and the scale of renovation are such that if we proceed stage by stage the village will not receive modern grain-harvesting combines even by the 13th Five-Year Plan. This is distinctly recognized by the workers of the association and of the Ministry of Agricultural Machinery. In order to maintain the delivery schedule for the new equipment as established by the

Food Program, they are employing some economic maneuvering--they decided that the planning of renovation objects, their building and the engineering preparations for production will proceed simultaneously with the development of the machine. The technical design born within the walls of Giprokombaynprom [State Planning Institute for the Combine Industry] began to be implemented as soon as workers became convinced of the operational capability of the new combine's technological design.

As a result, already today there is a careful drawing of the appearance of the modern enterprise that will be capable of maintaining in serial production the working parameters of the machine as established by designers. Large-scale building is proceeding in the main plant and its affiliates--in Belaya Kalitva of Rostov Oblast and Uryupinsk of Volgograd Oblast. As is appropriate prior to an extensive economic operation, the enterprise first "pulled up the rear"--the capacities of the instrument plant and non-standard equipment and of repair and energy services were renewed and mechanized storehouses were built for materials and parts of sets. Now work has begun on the new technological complexes.

"Haven't the combine builders taken on too much?" some may ask. "What if the machines do not pass testing? Who will then be responsible for the effectiveness of production expenditures?"

There is no doubt now that the Don will be successful. The machine is not inferior to the best foreign models when it comes to basic indicators such as productivity, threshing quality and grain losses. The national economic effectiveness of introducing new grain harvesting technology will of course be determined according to the work capability of fully-developed machines. This is why the workers of Rostsel'mash are not hiding the weak points of the design. The combine is subjected to the most severe testing. This year, for example, five test samples must harvest an area equal in size to that harvested by old combines in a period of 3 years. To do this new machines are being sent from one agricultural zone to another. Together with imported units they harvest sorghum, corn and sunflowers in addition to grain.

Of course, the pace of technological preparations depends greatly on the tests of the combine's reliability. If by the end of the year the Don is given the green light the number of design changes will be decreased to a minimum and vistas will be opened up for the continued technological preparation of production. This means that there will be more confidence in the fact that instruments, punches, attachments, non-standard equipment, special-order machine tools, automatic lines and parts for sets will all be ready by the indicated time.

"What is the probability that the Don will be 'christened' this year?" I asked the deputy chairman of USSR Goskomsel'khoshtekhnika [State Committee of the Agricultural Equipment Association], Leonid Alekseyevich Korbut, who heads the state committee.

"We are interested in getting the new grain harvesting equipment into the fields as soon as possible," he answered, "and we would also like to register samples into serial production based on 1983 test materials. But the machines

still have an insufficiently high coefficient of operational dependability. It should be no less than 0.95. In other words, it is considered tolerable if out of 100 percent of the work time only 5 percent is utilized to eliminate technical difficulties. At the present time somewhat more time is spent on this. But since designers, specialists from the association and ministry workers react quickly to our observations, we hope that the second stage of testing this year, conducted in Siberia and Kazakhstan, will yield the desired results."

Since the echelon is on its way, as we say, the Don will be given the green light. But this fact alone of course cannot guarantee that with mass production the village will receive a machine of the needed quality and dependability. The workers of Rostsel'mash have been manufacturing the Niva for 10 years now. And during all this time machine operators have directed a barrage of criticism at the quality of the combine assembly and of the manufacture of units and parts. Can't it happen that as regards serial production of the Don matters will be worse than with the Niva?

"No matter how the collective tries," answers the senior engineer of Rostsel'mash, Anatoliy Yevmenovich Tserna, "still the quality and dependability of the combine are no greater than technology will allow."

What are the technical possibilities of today's Rostsel'mash? Of course it is difficult to believe that the enterprise at one time manufactured carts, horse rakes, hay cutters, plows and harrows. We are reminded of this only by the exhibits in the plant museum. Every 6 minutes a combine leaves the main conveyor of the association. By February of next year the 2 millionth will be manufactured. And still, today's production imparts the flavor of the old. The buildings are low and solitary and overpopulated. The equipment does not shine like new. In reality Rostsel'mash underwent a more or less considerable degree of renovation during the Ninth Five-Year Plan, in connection with the transition to the manufacture of the Niva. Today one will not find even a dozen automated lines here. Since there is little modern equipment this means that there is a great deal of manual labor. This results in a deterioration of quality and dependability of production.

It is impossible to use the old equipment for the manufacture of the Don. Its anatomy is more complex than that of the Niva. More precision is needed for the manufacture of units and parts and in the purity of processing. If we move out into these technological parameters with old equipment it will be necessary to greatly increase the labor intensiveness of the manufacture of the new machines. But Rostsel'mash must make do with the existing number of workers. This is why 217 automated lines and complexes operating with the participation of robots and over 1,000 units of special equipment will be installed in its shops.

"When technology was being prepared for the Niva in Rostsel'mash the machine design included only those parts and installed in the shops was only that equipment proposed by our neighbors. We cut our coats according to the cloth," said the senior engineer of Soyuzkombaynprom [All-Union Combine Industry Association], Yuriy Nikolayevich Chilin. "But now we were told, 'Give us a proposal concerning what you need in order to secure the planned economic



effectiveness of the Don'. We prepared accounts and cooperating enterprises received the corresponding assignments."

Why wasn't there any doubt that the copy would be no worse than the original during the gearing up for production of the VAZ [Automobile produced by the Volga Automobile Plant imeni 50-Letiya SSSR] and the KamAZ [Automobile produced by the Kamsk Automobile Plant]? The answer is that these enterprises amassed the most progressive automobile-making technology in the world. Now it is the turn of Rostsel'mash to utilize priorities in becoming equipped with highly productive equipment.

Dependable production quality also signifies a stable collective. This is why new shops must attract not only by means of the level of technical progress. They must be attractive from the point of view of daily comforts as well. Such labor conditions are already being created. Plants for instrumental and non-standard equipment built during the renovation process have everything that is included in the understanding of modern everyday life, industrial esthetics and the quality of production. The attractive force of these circumstances has not been slow in being evidenced--in Rostsel'mash the ebb of cadres has stopped and an influx has begun. Young people, having felt what a significant job is beginning here, are reluctant to miss the opportunity to be a part of it.

What risk, then, are we talking about if the Don program has been carefully worked out and is being systematically implemented?

The development and introduction of new grain-harvesting technology is a key national economic task. Since this is the case, then people and organizations which will determine the success of the matter are recruited to solve the problem. The state has allocated extensive reserves for the implementation of the Don program. Several hundred million rubles have been supplied just for the renovation of Rostsel'mash. Its production capacities will be increased by two-thirds. Also being financed is the organization of production of diesel motors for the Don at the Khar'kov Serp i Molot Plant, new standard bridges for lead wheels in combine plants of Taganrog and Ternopol and broad reapers at the Tula Combine Plant and the Pervomayskiy Plant of Agricultural Machine Building. In connection with the assimilation of the manufacture of units for the new grain harvesting technology over 20 production objects are being modernized. A total of 450 enterprises are participating in preparations for the serial production of the Don family. We can imagine the entire complexity of organizing work on such a scale and with such a degree of responsibility as the workers of Rostsel'mash face with regard to final results--the manufacture of dependable, highly productive combines.

As for that part of technological preparations for production that the association is directly responsible for, it does not give rise to cause for alarm. The workers of the planning-technological institute, attached to the association since the beginning of renovation, is in charge of the situation and is increasing the pace of developing non-standard equipment, riggings and punches for the manufacture of design units, which will not be altered during the process of perfecting the combine. But how do we coordinate the activities

of all those collectives that are involved in the serial production of the new machine?

In order to coordinate all directions in multi-plan work, the Ritm Scientific-Production Association of the Ministry of Agricultural Machine Building is completing the development of an automated system for controlling the fulfillment of tasks according to the Don program. In the office of the general director of the Rostsel'mash association already today on display we find information on any aspect of this program--what must be done, by what time, who is responsible and the status of affairs at the given moment. Such "televisions" will soon be installed in the Ministry of Agricultural Machine Building and in USSR Gosplan.

But despite the fact that the course of work on the Don program is controlled by deputy ministers in each branch, many allied enterprises must be urged on. Already we have found some weak spots in the technological achievement of Don production. Thus, the organizations of Mintyazhstroy [Ministry of Heavy Machine Building] and USSR Minmontazhspetsstroy [Ministry of Installation and Special Construction Work] are holding back the introduction of objects in Belaya Kalitva and Taganrog. The elaboration and production of some types of special equipment is also being delayed. This year Rostsel'mash is to begin installation of an aluminum casting facility but the collective of the Novosibirsk plant, Siblitmash [Siberian Machine Casting Plant] of Minstankoprom [Ministry of the Machine Tool Industry] is still at the stage of elaborating the automated complexes it has been assigned to produce.

The construction of the cab building is being completed. The enterprises of Minelektrotekhprom [Ministry of the Electrical Equipment Industry] are obligated to install 73 automated welding lines for it, and some of these aren't even on paper yet. This type of uncertainty is also true for the delivery of the paint line.

The new combine must have only native parts. But Minneftekhimprom [Ministry of Petroleum Refining and the Petrochemical Industry], citing the shortage of capacities, is striving to move away from introducing the production of new wedge-shaped belts; Minkhimprom [Ministry of the Chemical Industry] is not coordinating the manufacture of about 200 plastic parts. No decision has been made about who will manufacture conditioners.

There is still time to coordinate all lines of the schedule for achieving the serial production of the Don. But this should not lull us. As has been said before, technology will be ready on time if the perfection of the machine's design is completed on schedule. Now we can add--if we also achieve the precise operation of the organizational mechanism for introducing new technology. The constructive elements of this system are a heightened sense of responsibility, initiative and enterprise in all Don program participants. Each person must exhibit maximal dependability in work. Then the degree of economic risk will be brought down to a minimum and the use in the village of new grain-harvesting technology will provide a great national economic effect.

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## FORESTRY AND TIMBER

### BRIEFS

OB RIVER TIMBER FLOATING--Toms--The Tym and Sangilka, the Parabel and Chuzik, the Chulym and the beauty herself, the Ob--"the approach routes" and main lines of the producers of north timber--have finally been completely freed of ice and have carried to plants and combines, processing centers the first load, which was prepared for shipment back in the winter. Some 400,000 m<sup>3</sup> of lumber--the most valuable Siberia raw material--will arrive during the short Siberian summer from the northern watches and logging centers and will fill the barges. Long lines of floats stretched to Nadym, Staroyugino, to new construction projects. Each day of navigation, which opened with a delay this year, brings reports on the shock labor of the collectives of shipping roads, crews of hoisting cranes and crews of tugboats. [By A. Aleksandrov] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 29 May 84 p 2] 7807

LUMBER FOR FOREIGN MARKETS--Krasnoyarsk--The Lesosibirsk and Novoyeniseysk sawing and wood processing combines have begun the shipment of lumber to the foreign market toward the 60th lumber export navigation. At the berths here the loading of barges with packets of saw logs made of famous Angara pine is being carried out at a shock pace. The sawmill workers of the combines here prepared well for the anniversary navigation. Some 15,000 m<sup>3</sup> more boards were sawed than last year, 108,000 m<sup>3</sup> more were seasoned in kilns, 45,000 m<sup>3</sup> more were made into packets and the volume of packets made of lumber of identical length increased by 83,000 m<sup>3</sup>. All this makes it possible to believe that the Siberian lumber export enterprises will cope with their plans by 1 October--5-10 days earlier than usual. [By V. Khrustalev] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 24 June 84 p 1] 7807

PECHORA RIVER TIMBER FLOATING--Troitsko-Pechorsk (Komi ASSR) (TASS)--Timber floating navigation began yesterday on the Pechora. During the short circum-polar summer more than 1 million m<sup>3</sup> of wood have to be delivered to consumers. Without waiting for the complete freeing of the river from ice, the water transport workers began in advance the loading of ships and formed rafts. [Text] [Moscow TRUD in Russian 15 May 84 p 1] 7807

ABAZA COMBINE SAVES LUMBER--Abaza, Khakasiya--The collective of the Abaza Lumber Combine is showing an example of the practical use of timber resources. Here with a constant volume of the procurement of wood in recent years they have achieved a twofold increase of the output of products. The comprehensive contract, which firmly connected the links of the technological chain, became the main stimulus for this. Exemplary order begins with the felling. With the

introduction of the contract much also changed on the conveyors of the combine. Whereas previously all large scraps were broken into technological chips, now they are obtaining from them packing crates, picket fence and lath. Neither sawdust nor cuttings are wasted. Hence, too, the beneficial changes in the economy of the enterprise. Whereas in 1970, for example, from 1 m<sup>3</sup> they obtained commodity production worth 35 rubles 20 kopecks, now they obtain products worth 71 rubles 18 kopecks. Labor productivity also increased. [By V. Khrustalev] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 May 84 p 1] 7807

STUMP PULLER--The pulling of stumps is labor-consuming work, which requires great efforts. Not without reason have designers tried to shift it to the shoulders of machines. But until recently people have had to carry out the cutting of stumps by hand. The "combine," which was developed by the staff members of the All-Union Planning and Design Institute of Timber Machine Building, should also save them from this difficult work. They entrusted all the difficult operations to a manipulator, which is mounted on a TT-4 tractor. The mechanical "arm" can extend to 8 m and lift a load of up to 800 kg, while knife-saws have been installed within its powerful gripper. They cut with ease even cedar stumps. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 Jun 84 p 2] 7807

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## LAND RECLAMATION AND WATER RESOURCES

### MINISTER ON LAND RECLAMATION REACHING A QUALITATIVELY NEW LEVEL

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 3, Mar 84 pp 47-53

[Article by N. Vasil'yev, USSR minister of land reclamation and water resources: "Land Reclamation--To a Qualitatively New Level"]

[Text] With great enthusiasm, Soviet land improvers have begun the chronicle of the fourth year of the Five-Year Plan. From the very first days of the new year, they set their sights on a further increase in labor ardor and, having made a good start, they continued the rapid pace of last year and are successfully fulfilling the plan for the first quarter of 1984.

The resolutions of the December (1983) CPSU Central Committee Plenum and the session of the USSR Supreme Soviet gave a powerful impulse to the labor and creative activity of the land reclamation collectives and they pointed out new horizons to be reached in the country's economic and social development. All of their thoughts and actions are now directed to making a concrete and worthy contribution in carrying out what has been planned.

Last year, the collectives of all organizations in the system of the USSR Ministry of Land Reclamation and Water Resources--water management construction, industry, operations, supply, science and project planning--made considerable efforts to increase the level of organization and discipline and to manage more effectively. Significant influence on increasing labor responsibility and output as well as on improving work attitudes is being exerted by such documents as the Labor Collectives Law and the resolutions on the consolidation of discipline and the development of the brigade form of labor organizations.

All of this was reflected in the work results. Land improvers fulfilled the plan for the third year of the Five-Year Plan for putting irrigated and drained lands into operation, for improving the state of reclamation and the reconstruction of existing irrigation systems and for assimilating capital investments. The plan for contract work was overfulfilled. The plans for all basic indicators were fulfilled by the RSFSR Ministry of Land Reclamation and Water Resources for the first time in the last decade and by the Main Administration for Nonchernozem Water Management Construction for the first time since it was organized.

Last year, through the joint efforts of organizations for water-management operations and farmers, a significant increase in production was achieved on reclaimed lands: grain, 17 percent; vegetables, 11 percent; fodder, 13 percent; sugar beets, 28 percent; and soybean production doubled.

To be sure, none of this is any reason for self-deception. The resolutions of the December Plenum require a continuation of the pace that has been set, consolidation of successes, constant increase in the level of economic management, more active development of the creative initiative of branch workers and a broad application of socialist competition and the advanced methods of labor organization. These questions are the subject of an extended meeting of the staff of the USSR Ministry of Land Reclamation and Water Resources and the presidium of the central committee of the labor union of agricultural workers in January 1984.

The extension of the approved initiative of advanced collectives of the country for an above-plan increase in labor productivity and a reduction in the production cost will be particularly significant for the fulfillment and overfulfillment of land reclamation plans.

For our sector as a whole, an increase of 1 percent in labor productivity and a reduction of 0.5 percent in the production cost mean putting an additional 15,000 hectares of irrigated and 20,000 hectares of drained lands into operation. As early as the following year, this, in turn, will permit the harvesting of additional grain, fodder, vegetables, cotton, fruit and grapes with a total value of R16 to 16 million from these lands. An above-plan increase in labor productivity and a reduction in the production cost on all existing reclaimed lands will ensure an increase of more than R200 million in farm output.

A decision has been made to support and develop this patriotic initiative everywhere, to organize the drafting and adoption of counterplans and socialist obligations on this basis, to establish effective control over their realization and to be energetic in disseminating advanced experience.

The addition of this goal to the plan is a most important condition to be able to do much in the next 2 years of the Five-Year Plan to compensate for shortfalls and, for many indicators, to reach the control figures of the Five-Year Plan.

This is the aim of the work of all organizations of the USSR Ministry of Land Reclamation and Water Resources, which, through the efforts of the party and government, became a vital link between the national economy of the USSR and the powerful production base, the specialized scientific-research and project-planning institutes, and the large collectives of the construction and operations organizations of water management.

In the way of equipment, land improvers have tens of thousands of excavators, bulldozers, scrapers and cranes. This permitted a 99.8-percent mechanization of earth works; the loading and unloading of rock, sand and coarse gravel are 99.3 percent mechanized; and wood, metal, concrete and

reinforced-concrete products are 98.7 percent mechanized. Water-management organizations have a powerful base for producing reinforced-concrete products and construction structures and for repairing equipment.

The increase in the scientific and technical level of construction in land improvement can be illustrated through the following examples: 20 years ago, only 2 percent of the channels of irrigation systems and revetments, concrete gutters or pipe lines; it is now 92 percent. At that time, the proportion of covered drainage systems was 26 percent, and now it is 79 percent. The irrigated land area increased from 0.5 million hectares to 7 million hectares during this period.

The technical level of land reclamation is characterized by the increasing application of polymers and laser technology, means of automation and telemechanization, single-block electric lifting pumps, trenchless drainage systems and effectiveness measures to regulate the level of ground water, and by new means of irrigation. The first few hundred highly productive machines of the "Kuban'" generation have appeared on the open spaces of the irrigated field. Each of them produces a solid band of artificial rain 800 meters wide along an irrigation path 2 to 2.5 kilometers long. The machine works automatically and meets the assigned irrigation norm. The artificial rain does not destroy the soil structure and moistens the ground uniformly. Just one operator handling a caravan of "Kuban'" machines frees dozens of tractor operators and irrigation specialists from the irrigation machines of the first generation.

The traditional stationary pumping stations with huge buildings of prefabricated reinforced concrete, the construction of which takes 1.5 to 2 years, are being replaced by complete blocks. The latter cost one-third to one-half as much as the stationary stations, their construction requires 80 percent less reinforced concrete and they are assembled and put into operation in only 3 months.

Seasonal electrified pumping stations, developed in cooperation with the "Sigma" concern (CSSR), are finding wide application in land reclamation. Their service life is three to four times that of diesel stations, the number of operating personnel is reduced and there are fuel savings.

The technical re-equipment and scientific and technical progress of the sector are taking place with the direct participation and assistance of the workers and specialists of related sectors of the national economy, including machine builders, chemists, instrument builders, energy specialists and workers in transportation, the building materials industry and, of course, the partners in the agroindustrial complex [APK].

The powerful production and technical base of the sector makes possible the solving of the most complicated tasks in land reclamation. Now in one 5-year period, as much reclaimed land is brought into operation as was accumulated through the hard work of hundreds of pre-revolutionary generations over many centuries.



In creating and consolidating the new sector, the party and government took the approach that without an all-round development of land reclamation in our country with its vast expanses and extremely difficult natural and climatic conditions, it is impossible to ensure the progressive development of agriculture.

One of the first documents providing for the development of land reclamation work in the country was the Decree of the Council of the People's Commissars "On Organizing Irrigation Work in Turkestan," signed by V. I. Lenin on 17 May 1918. V.I. Lenin repeatedly emphasized the necessity of reclaiming lands in our country, and for him it was important not just economically but also socially and politically. In the well-known letter "To the comrades communists of Azerbaijan, Georgia, Armenia, Dagestan and Gorskaya Republic," he wrote: "Irrigation is above all needed and above all it recreates the territory, it regenerates it, it buries the past and consolidates the transition to socialism" (Complete Collection of Works, vol 43, p 200).

It has been a little more than six decades since that time, an insignificant period compared with the history of land reclamation. But much has been done during this period through the incredible efforts of the entire Soviet nation. The area of reclaimed lands, this truly golden farming resource of our country, has reached 33 million hectares, including 19 million hectares of irrigated lands.

Land reclamation involves practically all zones of the country from the extreme south to the northern limits of farming, from the Baltic and Belorussia to the Far East, and there is not a single oblast or kray where some reclamation work or other would not be performed.

Irrigation has been developed on a large scale in new regions. In three decades in the European part of the USSR, the area of irrigated lands increased from 2.5 million to 8 million hectares. At the present time in the Volga region, 1.6 million hectares are irrigated using up-to-date engineered irrigation systems. Now not just individual farms but entire rayons of the Volga region have a stable fodder base regardless of weather conditions.

Northern Caucasus has become a large region of irrigated farming. There the area of irrigated lands has doubled, reaching 1.8 million hectares. Through land reclamation, more than 100,000 hectares of previously unfruitful lands subject to spring flooding along the northern arm of the Black Sea have been converted into highly productive rice fields. The total irrigated area in the Ukraine has quadrupled in 15 years and exceeds 2 million hectares. Through irrigation, there has been a consolidation of the fodder base in a number of republic oblasts, there was an increase in meat and milk production and the production of vegetables doubled.

In the Far East, large-scale work has been carried out in drainage, flood protection and the construction of rice systems.

Land reclamation is becoming a very important factor in transforming the nonchernozem zone of the RSFSR. There was particular expansion of land reclamation work here after 1974 in accordance with the resolution of the CPSU Central Committee and the USSR Council of Ministers "On Measures To Develop Further Agriculture in the Nonchernozem Zone of the RSFSR." In the years 1974 through 1982, R3.9 billion of capital investment went directly into land reclamation here. One and one-half million hectares of newly drained and 865 [sic] hectares of irrigated lands were put into operation. Technical crop work was carried out on an area of 3.6 million hectares. The area of drained and irrigated lands reached 3.8 million hectares. Reconstruction of irrigation and drainage systems was carried out on 326,000 hectares. Lands are now being drained using covered drainage systems, the most progressive method. Its share of construction reached 83 percent in 1982.

Work is being performed at a rapid rate to drain lands in the Baltic republics and in the swamp regions of the Ukraine and Belorussia. Here about one-third of all agricultural lands are comprised of reclaimed lands, and precisely this is the basis for intensive farming.

The development of land reclamation in new regions was accompanied by an increase in the volume of work in the regions of ancient irrigation, in the republics of Central Asia and Transcaucasia and in Kazakhstan. In these republics, the area of irrigated lands increased by more than 2 million hectares, and considerable work was done in the technical improvement of old systems, in the struggle against increasing saltiness and in increasing the water supply.

All of these measures have a beneficial effect on increasing the efficiency of the country's agricultural production and its stability against unfavorable weather conditions. The productivity of 1 hectare of irrigated land is 5.8 times that of unreclaimed land and the production of drained lands is 1.5 times that of unimproved land. Irrigated and drained lands, comprising 11 percent of the area in fields and perennial plantings, provide 34 percent of all farming output. The total production from horticulture on irrigated and drained lands in the public sector reached R16 billion in 1983.

Because of droughts and other unfavorable conditions during the last 3 5-year plans, there were some declines in production on unimproved lands, whereas production increased every year on reclaimed lands. In the current Five-Year Plan, the increase in the gross vegetable harvest has been fully assured by growing them on reclaimed lands. Irrigated and drained lands account for 70 percent of the total increase in fodder production and half of that of fruits and grapes.

The yield of agricultural crops on irrigated and drained lands at kolkhozes, sovkhozes, interfarm and other productive agricultural enterprises changed as follows (annual average, in quintals per hectare):

[Table on following page]

Crop	Irrigated Lands		Drained Lands	
	1966-1970	1981-1983	1966-1970	1981-1983
All grains	19.2	34.1	19.3	21.6
Corn	27.0	48.9	19.8	41.7
Rice	33.1	39.2	-	-
Cotton	24.1	29.5	-	-
Vegetables	145.0	185.0	171.0	171.0
Fodder crops (feed units)	26.0	38.9	16.7	25.6

It is possible to present a number of examples of farms, rayons, oblasts and entire republics that obtain stable bountiful harvests. Thus, on the irrigated lands of Krymsk Oblast, the grain yield is more than 50 quintals per hectare and that of hay from perennial grasses is about 60 quintals per hectare. In Stavropol'skiy Kray, on an area of 370,000 hectares, they obtain 7,000 feed units from each hectare. In the Uzbek SSR, along with good harvests of cotton, they harvest more than 70 quintals of grain corn per hectare and 150 quintals per hectare of hay from perennial grasses. At the kolkhoz imeni Kirov in Belozerskiy Rayon of Kherson Oblast, with programmed farming, the following harvests were obtained from irrigated lands under production conditions: wheat, 60.2 quintals per hectare; vegetables, 467 quintals; silage corn, 662; fodder root crops, 2,535 quintals per hectare. At the sovkhos "Meliorator" in Volgograd Oblast, irrigated lands yield 48.9 quintals of winter wheat per hectare, 63 quintals of grain corn, 17.8 quintals of soybeans and 133 quintals per hectare of hay from perennial grasses. At the kolkhoz imeni Radishchev in Smolensk Oblast, the grain harvest on drained lands amounted to 37.7 quintals per hectare, that of fodder roots was 450 quintals and that of flax fiber was 7.8 quintals per hectare. At the kolkhoz "Zavety Lenina" in Brest Oblast, the harvest from drained lands was 43.3 quintals per hectare for grain, 201 quintals for potatoes and 501 quintals per hectare for fodder roots.

There are many such examples. They indicate the great possibilities of reclaimed lands and define the high yield from capital investments in land reclamation, with the help of which the economic fertility of lands is raised to the programmed level.

This is precisely the way to achieve the greatest yield from capital investments, which is shown by the data of a calculation of the total increase in gross production from horticulture in the public sector for the years 1971-1980 compared with the average annual level for the years 1966-1970 (data from the USSR Central Statistical Administration).

Item	On Improved Lands	On Unimproved Lands
Capital investments of the State and kolkhozes to develop horticulture, in R billions	44.95	79.7
Total increase in gross production, R billions	32.6	12.0
Increase in production per ruble of capital investment, in kopecks	73.0	15.0

These data characterize today's yield from investment in land reclamation and are the result of considerable work to increase the area of irrigated and drained lands and to increase the horticultural output from them.

At the same time, there are significant shortcomings in the utilization of irrigated and drained lands, in organizing the operation of reclamation systems and in carrying out land reclamation work. One must not consider satisfactory the level of productivity that has been achieved for reclaimed lands. As a result of disrepair of the reclamation network and installations, as well as of increasing saltiness and the formation of swamps, about 100,000 hectares of irrigated lands and 90,000 hectares of drained lands go unused every year in the country as a whole. In 1983, about 250,000 hectares were not irrigated on kolkhozes and sovkhoses for organizational and managerial reasons.

On many farms there are violations of agrotechnology, irrigation routines are not adhered to, the irrigation does not last long, mineral and organic fertilizers are applied at under the norm, the structure of sown areas has not been worked out and crop rotations have not been assimilated. A significant quantity of irrigation equipment is idle at the kolkhozes and sovkhoses because of breakdowns and defects, and there is also a shortage of operators for irrigating machines and pumping stations.

An important role in increasing the yield from irrigated and drained lands belongs to the service for operating water reclamation systems, which is called upon to maintain the reclamation networks and installations and the technical means and structures on them and to guarantee the supply of water for irrigation and the carrying out of measures that prevent a worsening of the reclaimed condition of lands.

The critical comments addressed to land improvers are justified. There are still a number of instances of low quality in the planning and installation of land reclamation projects; standard construction periods are not being met and the overall execution of reclamation work is not being ensured everywhere. Sector workers are persistently struggling against negative factors in water management construction.

A good means of organizing irrigation are the 44 regional production associations (RPO) "Poliv" created as an experiment and taking over on their own account from the kolkhozes and sovkhoses not only the intrafarm network but also irrigation equipment. They irrigate agricultural crops and operate pumping stations, installations and pipelines. As a rule, the brigades and production teams of the RPO "Poliv" work under the conditions of the collective contract with the wage system of job contract plus bonus. The 5 years of their work experience confirmed the high efficiency of such a means of organizing irrigation work in the new regions of irrigated farming. According to accounting data, the yield is 15 to 20 percent higher on lands served by RPO "Poliv" (covering 376,000 hectares).

In September 1983, the CPSU Central Committee Politburo reviewed the question of developing a long-term program of land reclamation with the purpose of

creating a guaranteed food fund and of raising the well-being of the Soviet people. At the same time, it was noted that during recent decades there was a significant expansion in the area of irrigated and drained lands in our country and that the relative proportion of farm production from reclaimed lands increased.

As is known, the country now receives 100 percent of its cotton and rice from these lands, 75 percent of vegetables, about 50 percent of fruit and grapes, 25 percent of coarse and succulent fodder and much other valuable output. At the same time, for the purpose of a consistent realization of the Food Program, it has been decided to raise land reclamation to a qualitatively new level and to do a better job of utilizing its possibilities for increasing agricultural output and for improving farming stability.

The accumulated experience, the production base that has been created for water management organizations and the existence of stable collectives of land improvers make it possible to put on the agenda and solve more complicated large-scale tasks in developing this sector on the basis of an overall long-term program.

In this program, particular attention is being paid to implementing measures that ensure a high yield from irrigated and drained lands based on an improvement in the condition of lands, improved operation of water management systems, the widespread incorporation of efficient means of irrigation, a rational crop structure, the carrying out of environmental protection work and the redistribution of water resources in the interests of the national economy.

To raise land reclamation to a qualitatively new level means above all the realization of its greatest possibilities. Some examples have already been presented of the leading farms and oblasts that obtain good harvests, but that is not the limit. According to data by the Ukrainian Scientific-Research Institute for Irrigation Farming, fertilization (without irrigation) gives an increase in green corn mass of 24 quintals per hectare (10.5 percent), whereas irrigation alone increased the yield by 196 quintals per hectare (46.5 percent). At the same time, the use of both together gave an increase of 303 quintals per hectare.

An analogous effect is seen in the results of experiences over 3 years by the Turkmen Scientific-Research Institute for Hydrotechnology and Land Reclamation, where the yield of alfalfa hay reached 293 quintals per hectare. During the growing season, the crops were irrigated from 11 to 13 times and 400 kg of mineral fertilizers were applied per hectare prior to sowing. And in the following years, 200 kg per hectare were applied before the new growth of herbage. One can imagine what the yield is from irrigated land with the intelligent use of irrigation, fertilization, herbicides, quality seed, rayon varieties and scientifically-founded agrotechnology--and all of this with a strict determination of timing.

It should be stressed that land reclamation itself does not ensure a good yield but only creates a solid basis over many years for the growing of planned

harvests. Its possibilities are realized only by applying the entire complex of agrotechnical measures. And every violation of agrotechnology here leads to greater yield losses than on inadequately irrigated lands. It follows that the principal way to increase the yield from each irrigated hectare is to apply mineral and organic fertilizers at the full standard rate and to introduce progressive methods of growing agricultural crops with a programming of harvests. Increasing the yield from reclaimed lands is a general task and it must be solved through the combined efforts of all APK partners.

This was the subject of the special meeting of the commission of the USSR Council of Ministers Presidium on APK questions in November 1983, at which the proposals of the USSR Ministry of Agriculture and the USSR Ministry of Land Reclamation and Water Resources on increasing the efficiency of the use of reclaimed lands were considered. The decision of the commission determined a complex of measures to ensure a rapid and high yield from irrigated and drained lands based on the incorporation of scientifically-founded farming systems, the improved reclaimed condition of lands, improved operation of water management systems, wide application of efficient means of irrigation and a rational crop structure.

In 1984, it is planned to put all irrigated and drained land into agricultural production and, by the beginning of the growing season, to provide for the elimination of defects in the network and installations, for the timely repair of the ground and overhead irrigation machinery, and for the training and the provision of the farms with the full complement of operators, overhead irrigation machines and operators of pumping stations for a two-shift operation.

It was decided to determine precisely the structure of sown areas on irrigated and drained lands for each farm, having in mind an increase in the area sown in grain corn and perennial grasses, particularly alfalfa. The quality of mineral fertilizers, soil improvers and pesticides especially allocated to farms with reclaimed lands was determined. These farms are to be allocated on a priority basis complexes of soil-cultivating and sowing implements in accordance with technological charts, machines for carrying out reclamation and agrochemical work, harvest machinery and transport means essential for the mechanization of all processes in the cultivation and harvest of agricultural crops on irrigated and drained lands.

In 1984, on an area of 3.23 million hectares of irrigated lands, it is planned to implement the programmed growing of large harvests of grain, vegetables and fodder crops. An important role in carrying out this work belongs to the science of agricultural and land improvement. The scientific-research institutes will provide practical help to the farms in incorporating the programmed growing of harvests.

Springtime for land improvers is the time to prepare systems for the growing system and the volume of this work is characterized by these magnitudes: complete repair and operational work for a sum of about \$500 million, remove the sediment from more than 360,000 km of channels, repair 33,000 water installations of the interfarm and 177,000 installations of the intrafarm network, prepare 5,200 interfarm pumping stations and 5,500 vertical drainage holes for operations and carry out desalinization of 1.8 million hectares and moisturization on 7.5 million hectares.



At the same time, water continues to be accumulated in reservoirs and measures have been worked out to ensure the established water distribution and to adhere to the work routine of reservoirs and to the rational utilization of water resources. On farms with reclaimed lands, much attention is being paid to the introduction of the brigade contract and other progressive forms of the organization and payment of wages, to the dissemination of the experience of advanced workers and to the wide application of socialist competition among the workers of kolkhozes, sovkhozes and water management organizations to attain high yields for all agricultural crops.

Certainly the implementation of all these measures to increase the efficiency of the utilization of reclaimed lands will bring about a large increment in output. However, this is not sufficient to solve the country's economic problem of increasing agricultural output to magnitudes that fully satisfy our requirements, of removing agricultural production from the influence of unfavorable climatic conditions and of giving it stability and dynamic development.

That is why an important role in the Food Program approved by the May (1982) CPSU Central Committee Plenum is assigned to the further development of land reclamation. It is planned to increase the area of irrigated lands to 23-25 million hectares in 1990 and that of drained lands to 18-19 million hectares. In regions of irrigated farming, they will create zones of guaranteed grain production, especially for corn. The overall grain harvest from irrigated lands will be 20 to 22 million tons in 1990, including 3.3 to 3.5 million tons of rice.

It is planned to increase the production of coarse and succulent fodder on plowed lands, hay fields and pastures to 82 million tons by the end of the 12th Five-Year Plan. In this regard, particular attention is being paid to the production of feed grain and high-protein fodder. It is planned to create specialized sovkhozes on irrigated lands to grow grain corn. At animal husbandry complexes, fodder lands are being organized to produce perennial grasses and silage crops. Zones for the guaranteed production of vegetables and early potatoes on irrigation lands will be created near large cities and industrial centers.

The greatest yield from irrigated lands is being attained through the greater bioclimatic potential in the country's southern regions, in northern Caucasia, in the lower Volga region, in the southern Ukraine and in Moldavia, in Kazakhstan, Central Asia and Transcaucasia. However, the further development of irrigation in these regions is being held back by an insufficient water supply.

Our country occupies one of the top places in the world in average-annual river volume, but its territorial distribution is what is important for supplying the national economy. One 15 percent of the river volume belongs to the southern and southwestern regions, where most industrial and agricultural production is concentrated and where about 80 percent of the people live, but even in our time in particular regions and republics, the development of irrigated farming and the growth in population, cities and industry--the entire contemporary economy--determined the deficit in the water balance.



The problem of interbasin redistribution of water resources is therefore attaining more and more significance for the State as a whole. Many large canals have been and are being constructed for the purpose of supplying water from one basin to another. Included are such canals, for example, as the canal imeni Moscow, the Karakumskiy, Severo-Krymskiy, Irtysh-Karaganda-Dzhezkazgan, Dnieper-Donbass, Dnieper-Krivoy Rog, Bol-shoy Stavropol'skiy, Saratovskiy, Kuybyshevskiy, Karshinskiy, Amy-Bukharskiy and other canals.

The Food Program foresees the further development of work to distribute water resources in the interests of the entire national economy. It is planned to carry out the construction of top-priority installations for delivering part of the volume of northern rivers into the Volga River Basin. Also foreseen is the construction of the Volga-Don, Rostov-Krasnodar, Volga-Chogray and Danube-Dnieper canals. Now on the agenda is a task of no less importance, the delivery of part of the volume of Siberian rivers to the Transural part of the RSFSR and to Kazakhstan and Central Asia. This will make it possible to solve the problem of supplying water for the developing national economy of these regions. Many additional millions of tons of grain, milk, meat, vegetables, cucurbits, potatoes and other production will be obtained on irrigated lands. Passing through regions of a large-scale complex of valuable mineral deposits, the main canal for transferring Siberian water to Central Asia will make possible the inclusion of rich natural resources in the national economic balance.

Involved is the social development of large regions and the creation of new cities, industrial centers and new regions of irrigated farming. It also means an increase in the wealth and a consolidation of the strength of our homeland.

There is no more responsible and honorable task for land improvers than the implementation of party mandates, and they are full of determination to apply all of their efforts to put them into effect for the good of the Soviet people.

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